BALES' BEHAVIORAL FACTORS, SELECTED DEMOGRAPHIC VARIABLES, AND TEACHER ABSENTEEISM

BY

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Joyce Gardner Stock

Dedicated

to

James Matthew Stock

aged four

who "helped score" forms

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BALES' BEHAVIORAL FACTORS, SELECTED DEMOGRAPHIC VARIABLES, AND TEACHER ABSENTEEISM

By

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Chairman: Dr. Ralph Kimbrough
Major Department: Department of Educational Administration and Supervision

The purpose of this study was to investigate the relationships among Bales' behavioral factors (power, sociability, and intellect), selected demographic variables, and teacher absenteeism. The primary question was whether behavioral factor ratings by colleagues would predict teacher absenteeism. Statistical control was sought for age, gender, marital status, degree, number of years of teaching experience, school location, school enrollment, and academic department.

A total of 330 teachers in 45 departmental groups at 13 high schools in seven Central Florida county districts served as voluntary participants in the study. Each teacher completed an information sheet providing personal demographic and absence data. Each teacher used Bales' adjective form to rate five colleagues on specific behaviors and in turn was rated by five colleagues. Average scores for each teacher on behavioral factors were determined. Group means and group heterogeneity on the three factors were also determined. Statistical Analysis System correlation, t-test, ANOVA, and multiple regression procedures were utilized to test null hypotheses at the .05 level of significance.

Power was related to marital status. Sociability was related to age, degree, experience, and department. Intellect was related to age, degree, experience, and enrollment. Demographic variables predicted 6.6 percent of the variance in sociability and 11.4 percent of the variance in intellect. Absenteeism was related to age, degree, and intellect. Group mean sociability was related to percent of department female. Group mean intellect was related to group mean age, percent of department married, mean number of degrees held by departmental members, and school enrollment. Group demographic variables predicted 3.4 percent of the variance in group mean intellect. Group mean absenteeism was related to mean number of degrees held by departmental members and group mean years of experience.

Teacher absenteeism could not be predicted by knowledge of individual or group power, sociability, or intellect levels nor group heterogeneity on behavioral factors when controlling for eight demographic variables. Teacher absenteeism cannot be assumed to be closely related to group health factors which may be manipulated in order to cut expenses.

CHAPTER I

INTRODUCTION

Human beings are members of many groups beginning with birth and entry into a small primary family group concomitant with entry into the huge secondary family of mankind. Membership in a particular group may be totally involuntary or voluntary to various degrees. Each group member desires that group norms reflect personal values and behaviors and is comfortable in a group to the extent that other group members are perceived as similar. When other individuals are perceived as dissimilar, they may be ignored, avoided, criticized, or even loaded by the millions onto trains to be hauled to concentration camps to be gassed.

Bales and Cohen (1979) have developed a theoretical system which permits observers to describe positions of members in a group and to infer what their relations with each other are likely to be. The system is based on three variables, empirically determined to account for the greatest variance in the perceptions by comembers of other individuals in a group. The system permits understanding of group behavior which can facilitate change when change is desired by group members or a group leader concerned with improving individual satisfaction, group morale, or utilization of human resources. Individual position in a group is determined on the basis of how an individual is rated on power, sociability, and intellect behavioral factors by other group members. Individuals rated higher on a particular behavioral factor may be more comfortable in a group if a high score on that factor reflects the group norm and may make a greater effort to avoid absences from the group. Groups may exhibit lower mean levels of absenteeism when members are perceived as higher or more homogeneous on behavioral factors.

Determining the extent of the relationship between Bales' behavioral factors and teacher absenteeism provides for the determination of the extent to which absenteeism can be used as an indirect measure of power, sociability, and intellect levels. Knowledge of power, sociability, and intellect levels of individuals is necessary in order to plot group structure and utilize Bales' theory which ties structure to health (Bales & Cohen, 1979). Promotion of group health is considered a worthy goal by those concerned with teachers as individuals since a healthy group provides a psychologically safe environment for individual growth.

Determining the extent of the relationship between Bales' behavioral factors and teacher absenteeism also provides for the determination of the extent to which manipulations of power, sociability, or intellect levels can be expected to affect absenteeism. Discouraging teacher absenteeism is considered a worthy goal by those concerned with encouraging continuity of quality instruction and those concerned with minimizing educational expenses. Bridges (1980, p. 41) estimates that time lost through absenteeism by elementary and secondary teachers amounts to approximately 3.75 percent of the total scheduled workdays and costs more than one-half billion dollars for substitutes and one hundred and twenty million dollars for fringe benefits which teachers receive whether or not they are in the classroom. Teacher absenteeism is not only expensive but can also have a detrimental effect on the educational progress of students. Substitute teachers do not know the children and their needs as well as regular teachers. Pupils do not feel as accountable for quality of work as substitutes have limited power to evaluate. In a study involving more than 18,000 classroom observations in 112 suburban school systems throughout the country, Olson (1971) found that the effectiveness of substitute teachers was far below that of regular teachers. Teachers may be absent for many reasons beyond the control of an administrator but any possibilities for control should be investigated.

Statement of the Problem

The focal point of the study was the determination of the extent of relationship between Bales' behavioral factors and teacher absenteeism. This study included an examination of the relationships of demographic variables to behavioral factors and to absenteeism to allow for their statistical control.

It was determined whether there were statistically significant relationships between power, sociability, or intellect scores of teachers and age of the teachers, gender of the teachers, marital status of the teachers, highest degree held by the teachers, number of years' teaching experience of the teachers, school location, school enrollment, or academic department. It was determined whether there were statistically significant relationships between teacher absenteeism and these demographic variables. Then it was determined whether there were statistically significant relationships between power, sociability, or intellect scores of teachers and teacher absenteeism.

It was determined whether there were statistically significant relationships between group mean scores on power, sociability, or intellect and group mean age of teachers, percent of group female, percent of group married, group mean number of degrees, group mean years' teaching experience, school location, school enrollment, and academic department. It was determined whether there were statistically significant relationships between group mean absenteeism and these demographic variables. Then it was determined whether there were statistically significant relationships between group mean scores on power, sociability, or intellect and group mean absenteeism.

Finally, it was determined whether there were statistically significant relationships between group heterogeneity on power, sociability, or intellect and group mean absenteeism.

Hypotheses

Hypotheses were written in null form for statistical analyses. The .05 level of significance was selected as the level at which the null hypotheses would be rejected.

Hypothesis 1

There are no statistically significant relationships between power, sociability, or intellect scores of teachers and selected demographic variables:

1.1 Age of the teachers
1.2 Gender of the teachers (female or male)
1.3 Marital status of the teachers (married or single)
1.4 Highest degree held by the teachers (bachelor's, master's, specialist, or doctorate)
1.5 Number of years' teaching experience of the teachers
1.6 School location (city, suburban, or rural)
1.7 School enrollment
1.8 Academic department (English, math, science, or social studies)

Hypothesis 2

There are no statistically significant relationships between teacher absenteeism and selected demographic variables:

2.1 Age of the teachers

2.2 Gender of the teachers (female or male)

2.3 Marital status of the teachers (married or single)

2.4 Highest degree held by the teachers (bachelor's, master's, specialist, or doctorate)

2.5 Number of years' teaching experience of the teachers

2.6 School location (city, suburban, or rural)

2.7 School enrollment

2.8 Academic department (English, math, science, or social studies)

Hypothesis 3

There are no statistically significant relationships between power, sociability, or intellect scores of teachers and teacher absenteeism.

Hypothesis 4

There are no statistically significant relationships between group mean scores on power, sociability, or intellect and group make-up on selected demographic variables:

4.1 Group mean age of teachers

4.2 Percent of group female

4.3 Percent of group married

4.4 Group mean number of degrees

4.5 Group mean years' teaching experience

4.6 School location (city, suburban, or rural)

4.7 School enrollment

4.8 Academic department (English, math, science, or social studies)

Hypothesis 5

There are no statistically significant relationships between group mean absenteeism and group make-up on selected demographic variables:

5.1 Group mean age of teachers

5.2 Percent of group female

5.3 Percent of group married

5.4 Group mean number of degrees

5.5 Group mean years' teaching experience

5.6 School location (city, suburban, or rural)

5.7 School enrollment

5.8 Academic department (English, math, science, or social studies)

Hypothesis 6

There are no statistically significant relationships between group mean scores on power, sociability, or intellect and group mean absenteeism.

Hypothesis 7

There are no statistically significant relationships between group heterogeneity on power, sociability, or intellect scores and group mean absenteeism.

Delimitations and Limitations

Data analyzed in this study were collected by means of voluntary teacher completion of an information sheet and Bales' adjective rating forms. Subjects were 330 teachers in 45 English, math, science, or social studies departments at 13 high schools in seven districts in Central Florida. Data were examined for the single 1981-1982 school year up until Easter. Schools were not selected randomly but were those schools where principals volunteered to involve their teachers in the study. Any generalization to teachers of other grade levels, academic subjects, or geographical areas is to be considered tenuous.

Teachers' stated perceptions of teacher behavior are valid to the extent that they attempted to thoughtfully and honestly depict their perceptions and the extent to which teachers had interacted and observed behavior. There is the possibility that teachers in some departments had seen very little of one another.

Many variables affecting group structure and teacher absenteeism are not included in this study. There were financial restraints and it was determined that only 15 minutes of teacher time could be purchased.

The study is ex post facto (from after the fact) research. Variations in the independent variables have already been determined in the natural course of events. Thus, the maximum possible accomplishment is determination of the extent of concomitant variation in the independent variables and dependent variable. With evidence of concomitant variation, there is reason to proceed experimentally to manipulate independent variables to determine whether one can infer a causal relationship. A causal relationship can only be inferred when one establishes, not only that a statistical relationship between x and y exists, but also that x preceded y in time and that other factors did not determine y. Without followup with experimental study, concomitant variation does not provide evidence of a genuine relationship between x and y since the relationship may be spurious due to common cause (x and y may be caused by a third variable), reverse causality (perhaps y causes x), or the presence of other independent variables (x_2 and x_3 may also be antecedent factors for the variation in y). Only experimental research can provide truly useful information telling one what to do to accomplish an objective.

There were 330 teachers participating in this study, and the large sample size made it easier to reach the level of significance required for rejection of a null hypothesis. Thus R-squares which report common variance must be noted. On the other hand, the large sample size puts strength in those conclusions that no relationships between variables exist. There were only 45 groups of teachers so R-squares based on group data are inflated. However, the correction formula, $R_c^2=R^2-(k/N-k-1)(1-R^2)$ was utilized and corrected R-squares are reported.

Rationale

The ratings by group members of an individual on Bales' three behavioral factors describe the position of the individual in the group structure. The position of an individual in a group will fall along an Up (U) - Down (D) power dimension, a Positive (P) - Negative (N) sociability dimension, and a Forward (F) - Backward (B) intellect dimension.

A three-dimensional physical space may be used to picture the location of individuals in a group. The direction and distance of each person from the center or zero position give a highly useful means of describing the relationships of the group members. The spatial model can be visualized by using your body as the center, above you and below you for up and down on power, the direction to your right for positive and to your left for negative on sociability, and ahead of you for forward and behind you for backward on intellect.

If higher positions on each dimension reflect group norms, an individual's position in a group is higher to the extent that (s)he is perceived as being more up, more positive, and more forward. The individual's position is lower to the extent that (s)he is perceived as being more down, more negative, and more backward.

It would seem logical to suppose that an individual in a higher position in a group structure would choose to spend more time with the group than would an individual in a lower position in the group structure. Thus, individuals perceived by group members as higher on power, sociability, and intellect factors may exhibit less absenteeism. Group mean absenteeism may be less when members are perceived as more homogeneous.

Need for the Study

Two methods (Bales & Cohen, 1979) have been developed for measurement of power, sociability, and intellect levels of individuals in a group. One method involves recording information about each act of communication by an observer and is quite complicated and time-consuming. The other method, the one used in this study, involves collecting retrospective ratings of behavior of group comembers provided by other group members. A simple unobtrusive measure of behavioral factors would facilitate collection of data useful in group study and group development. If absenteeism were significantly related to behavioral factors, absence data would provide such a measure.

Research studies designed to assess the relationship of teacher absenteeism with other variables have been limited, both in number and in importance of variables investigated. In some studies, easily measured variables are selected in a shot gun fashion. When testing long lists of variables for significance, one can expect some significant results to occur by chance alone in that situation which would not occur were the study repeated. In other studies, important-sounding but vague variables are selected such as morale and principal's leadership style. There is clearly a need for studies in which variables selected are based on a well developed, empirically grounded theoretical system and where variables are ones which could actually be manipulated should a statistical relationship with absenteeism be found.

Definition of Terms

Absenteeism

This term refers to sick leave days used for personal reasons during the 1981-1982 school year till Easter. Not included are days that were part of long-term absences of more than 10 consecutive days for surgery, maternity, and such.

Adjective Rating Form

This instrument developed by Bales and Cohen (1979, pp. 392 & 407) is used by individuals to record perceptions of the behavior of group members.

Behavioral Dimensions

Power, sociability, and intellect factor ratings are plotted on paper to illustrate group structure dimensions.

Behavioral Factors

Power, sociability, and intellect are factors empirically derived by Bales to account for the greatest variance in perceptions of group members by comembers.

Central Florida School Districts

This term refers to the Brevard, Lake, Marion, Orange, Osceola, Seminole, and Volusia County school systems located in Central Florida.

Demographic Variables

Personal demographic variables examined utilizing individual data were age, gender, marital status (married or single), education (highest degree), and teaching experience while situational demographic variables included school location (city, suburban, or rural), school enrollment, and academic department (English, math, science, or social studies). Utilizing group data, variables were mean age, percent female, percent married, mean number of degrees, mean years' experience, school location, school enrollment, and academic department.

Field Diagram

This diagram shows the location of group members in one particular two-dimensional plane of the three-dimensional space. An individual field diagram shows how one person rates the behavior of other group members. A group average field diagram shows the average rating of each individual by all group members.

Heterogeneity

This term refers to the average distance of individual group members from the group mean on power, sociability, or intellect.

Intellect

This term refers to forward behaviors considered instrumentally controlled and carefully regulated by intellectual attempts to keep the behavior on a previsualized track versus backward behaviors which are emotionally expressive.

Power

This term refers to upward dominant behaviors versus downward submissive behaviors.

Principal

This school administrator is directly responsible for the management of the school and for carrying out the policies of the school board within the school.

School District

This term refers to one of the 67 county school systems within the State of Florida.

Sociability

This term refers to positive friendly behaviors versus negative unfriendly behaviors.

SYMLOG

This acronym stands for "systematic multiple level observation of groups" and is a theoretical system for understanding group dynamics which is based on more than two decades of research and testing by Bales. The method for studying groups requires observation of the actual behavior of group members during normal activity. Group members may observe and record overt behavior as well as values comembers state they ought to realize in their behavior. Group members use standard forms for describing their observations and impressions, which enable them to compare their perceptions and discuss how to change group structure in order to increase member satisfaction and morale.

SYMLOG Three-Dimensional Spatial Model

This frame of reference central to the SYMLOG system permits the visualization of relative positions of group members in a group structure. Bales' three behavioral dimensions are imagined as intersecting at a zero point in the center of a cube. The dimension upward and downward from the center of the space is used to represent the power dimension of behavior that is commonly called dominant versus submissive. The dimension horizontally to the right and left of the center is used to represent the positive versus negative sociability dimension of behavior which is commonly called friendly versus unfriendly. The intellect dimension can be visualized if one imagines oneself at the center of the cube, with the right arm extended in the positive direction and the left arm extended in the negative direction. The direction in which one faces may be called forward to represent behavior that is instrumentally controlled and carefully regulated by intellectual attempts to keep the behavior on a pre-visualized track, to avoid making mistakes in order to solve a problem, or to maximize the effectiveness of work toward a pre-visualized goal. The opposite direction can represent behavior that is emotionally expressive or backward.

Teacher

This term refers to a high school English, math, science, or social studies teacher in one of seven Central Florida school districts.

Organization of the Report

A statement of the problem, hypotheses, delimitations and limitations, rationale, need for the study, and definitions have been presented in Chapter I. Chapter II contains a review of related literature. Procedures used in the study are described in Chapter III. Chapter IV contains the presentation and analysis of the data. Chapter V contains a summary of the problem and procedures, findings, conclusions, and recommendations for further study.

CHAPTER II

LITERATURE REVIEW

Discussed in this chapter are behavioral categories, Bales' behavioral dimensions and organizational health, Bales' behavioral factors and demographic variables, absenteeism and organizational health, and absenteeism and demographic variables.

Behavioral Categories

Individual differences in physical structure, physiological function, and behavior are exhibited within any sexually reproducing species and provide the potentiality for adaptation to changed surroundings. Variation gives a population greater viability and provides possibilities for ultimate speciation. According to Freedman (1974, p. 81), individual uniqueness is a result of the actualization of a highly improbable genotype in a highly variable environment. Each mother and father may produce 8,388,608 kinds of gametes and if only two percent of the genes were heterozygous, a single cross-over between each pair of strands would raise the figure to 8,388,608 followed by 23 zeros (Stern, 1960). Thus attempts to establish a stable typology of personality are doomed. There are no pure types (Sheldon & Stevens, 1942). Nature provides for continuous variation of behavior rather than for discontinuous categories or types (Freedman, 1974, p. 83).

However, the tendency to establish typologies goes back to the eidos of Plato and implies that "typical" aspects of a phenomenon can be described and that variations are "shadows on a cave wall" due to imperfect replicas of the type described (Mayr, 1958, p. 151). Human behavior has been grouped into various categories over the years. For example, Hippocrates wrote of sanguine, melancholic, choleric, and phlegmatic temperaments (Allport, 1937). Mischel (1968, p. 43) concludes that the construction of behavioral categories may primarily meet needs of the observer rather than reflect behavioral consistencies of the observed. Human beings have a tendency to group the wide variety of perceptual data to which they are constantly exposed into fewer and simpler forms and categories according to the limits of the information-organizing capacity and memory (Bruner, 1958). Human beings appear to have construction limits between three and seven units (Mandler, 1968). Factor-analytic studies have yielded similar factor structures for ratings of complete strangers and for subjects who are known well by the raters (Passini & Norman, 1966). Analysis of ratings of the similarity of the meaning of trait names yielded a factor structure essentially identical with that obtained for the ratings of people (D'Andrade, 1965). Other studies suggest that ratings, and the factors identified by the analyses of trait ratings, often reflect the social stereotypes and conceptual dimensions of the judges (Mulaik, 1964). The user of factor analysis does not discover underlying personality traits (Overall, 1964, p. 270). The procedure only sorts test responses into relatively homogeneous clusters. Results depend on items and subjects selected by the researcher and on details of factorial procedures and decisions.

Though discrete behavioral categories may imperfectly reflect behavioral reality, categorical systems provide a means of sorting perceptual data and dealing with reality. They range from McGregor's (1960) simplistic X or Y behavioral categories to Bales' three behavioral dimensions which allow observers to visualize and plot perceptions of behaviors in a three-dimensional space. Bales' categories are similar to ones constructed by other scholars. Buss and Plomin (1975) present four categories, namely, activity (total energy output), sociability (affiliativeness), impulsivity (quickness versus inhibition of response), and emotionality (intensity of reaction). The first three categories resemble Bales' categories while emotionality resembles a fourth factor Bales discussed (Bales & Cohen, 1979, p. 296) but did not include in his system.

Hippocrates explained behavioral differences in terms of biochemical predominance of blood, black bile, yellow bile, or phlegm while modern social scientists have emphasized the effect of environment on behavior. Buss and Plomin (1975) examined research which suggested that activity, sociability, and emotionality meet five criteria for temperaments, namely, inheritance, stability during childhood, retention into maturity, history of adaptive value, and presence in animal forebears. Freedman (1974, p. 92) has emphasized the role of genetic and environmental interaction. An underlying disposition or genotype may manifest itself behaviorally in diverse ways in different situations so that heterogeneous behaviors can be signs of the same underlying trait. Mischel (1968, p. 38) states that all behaviors are affected by the details of the particular evoking conditions in which they occur. Mischel cites many studies providing considerable evidence for behavioral specificity across situations (Burwen & Campbell, 1957; Hartshorne & May, 1928; Sears, 1963). Bales (1970, p. 16) believes that behavior and perceptions of behavior can change.

Bales' Behavioral Dimensions and Organizational Health

Bales (1970) has developed a three-dimensional spatial model of group structure to describe the positions of participants in a group and to infer what their relations with each other are likely to be. The spatial model is based upon the statistical methods of factor analysis. Information from previous studies is arranged and compressed into a description of a set of types of group roles. Descriptions of interpersonal behavior as perceived and evaluated by others in the group apply in a statistical kind of way to the sorts of persons that have been found in the particular type of group role described. These perceptions and evaluations depend upon a person's personality, his behavior, and his position in the group, as well as those of all the other members of the group. Interpersonal behavior may reflect only one side of a personality, elicited by a particular group due to its structure and one's role in it and the expectations of others. As one perceives and evaluates the behavior of a person in a particular group, there is no way of knowing whether what one sees is more closely related to the group role of the person or to his more permanent personality, or to one's own personality as a rater.

The group role of a given person is usually profoundly affected by the perceptions, evaluations, expectations, and behavior of all the other group members. To change a person's group role, one may need to change others in the group rather than the personality of the acting person. However, if the behavior is importantly determined by special features of the personality of the acting individual, then one cannot expect it to change much without changes in his more basic personality. Although the individual may be forced into a certain kind of interpersonal behavior by the perceptions, evaluations, expectations, and behavior of other group members, they may be reacting mainly to special features of his personality. In this case, it may be easier to try to modify the personality of the individual than to change the evaluation of all group members. In other cases the evaluation of group members may be relatively easy to change.

If one wishes to understand a group and perhaps change it, one must consider the way in which personalities or selected sides of personalities fit together and form a larger group structure. A group is divided into specialized roles and cliques. A characteristic mode of behavior of an individual may be induced by his place in the group structure, his group role which is related to the total constellation of roles in the group. The group structure may leave gaps into which the individual is drawn. Other parts of the group may form closed coalitions which exclude him. Other persons as part of a group structure may unwittingly use him or coerce him in many subtle ways.

Bales' spatial model of group structure provides information in regard to how an individual is perceived by other group members along three dimensions. The power dimension tells how far U (upward) or D (downward) an individual is perceived to be. A sociability dimension tells how P (positive) or N (negative) an individual is perceived to be. A third dimension tells how F (forward) or

B (backward) an individual is perceived to be in regard to use of intellect. The position of any person in three-dimensional physical space can be described by stating where he is along each of the three reference dimensions. So described, his location in relation to any other person in the space, or his direction and distance from the center can be determined by computation. The direction and distance of each person from the center give a highly useful means of describing the relation of each person to each other.

When you visualize the spatial model by using your body as the center, above you and below you for U and D, the direction to your right for P and to your left for N, and ahead of you for F and behind you for B, the indefinite number of possible directions can be grouped into 26 plus a region around the point of origin for points which are not far enough out from the center in any direction to be considered significantly directional. All possible points in the space are thus grouped by the classification in such a way that they fall along the lines of the 26 directions or within the zero region, each point being brought to the directional line to which it is closest, or to the zero point. The names of the directions are used as the titles of types. Composite names consist of one, two, or three names of directional components. The case of no direction in any of the three dimensions, direction zero, is called type AVE for average. The other 26 directions, forming a spiral from highest position to lowest position, are called types:

U, UP, UPF, UF, UNF, UN, UNB, UB, UPB,
P, PF, F, NF, N, NB, B, PB,
DP, DPF, DF, DNF, DN, DNB, DB, DPB, D

Group structure can prevent utilization of individual resources for the benefit of the organization. According to Bales, many characteristics having nothing to do with intelligence determine an individual's status and power in a group, and the extent to which his ideas are heard, accepted, and utilized. Characteristics include age, sex, color, ethnic background, religion, family, family role, friends, occupation, and amount and source of income. It would seem desirable for the sake of the organization to determine how individual intelligence can be utilized without regard to age, sex, color, and such. The unutilized or underutilized brain power is that of individuals perceived to be low in power by other group members.

Bales distinguishes between status and power. Status involves power as well as conformity to group norms. The possession of power is the possession of the actual ability to influence the actions of others whether or not one conforms to group norms.

Bales (1980) has prepared a "SYMLOG Case Study Kit" which provides instructions and forms to enable a task-oriented group to conduct a self study for the purpose of improving group morale and satisfaction of group members.

Each individual not only provides observations of his own and others' behavior, but also adds up the scores, constructs a diagram summarizing the results, and thinks about the implications of the diagram in preparation for a discussion session.

Individuals record observations about the behavior of other group members, about their own actual behavior, and about their subjective attitudes about their own behavior. That is, they describe ways they ought or wish to behave as well as behaviors they believe they should avoid or reject. Behaviors are described as to where they fall along power, sociability, and intellect dimensions.

Using the three dimensions, there are 27 possible descriptions of behavior. Since each of the three independent dimensions has two opposite directions and a center area, any of the three positions on a given dimension may be combined with any position on each of the other two dimensions. Thus, there are theoretically nine subtypes of upward behavior, nine subtypes of downward behavior, nine subtypes of positive behavior, nine subtypes of negative behavior, nine subtypes of forward behavior, and nine subtypes of backward behavior.

Upward versus downward directions represent behaviors considered dominant versus submissive. Individuals upward on power are active, dominant, and talkative. They may seem extroverted, outgoing, and positive; may seem domineering, tough-minded, and powerful; may act as assertive business-like managers; may joke around and be dramatic; may act as purposeful democratic leaders; may seem entertaining, sociable, warm, and smiling; may seem authoritarian, controlling, and disapproving; and may seem provocative, egocentric, and act like show offs. Individuals upward on power value material success and power. They may value popularity and social success; tough-minded assertiveness; efficiency and strong effective management; having a good time and self-expression; social solidarity and progress; making others feel happy; a powerful authority and law and order; and rugged individualism and self-gratification.

Individuals downward on power are passive, introverted, and untalkative. They may seem afraid to try and doubtful of ability; may seem to work submissively; may seem depressed, sad, and resentful; may seem to look up to others and show trust; may seem quietly happy just to be with others; may seem gentle and willing to accept responsibility; may seem alienated and withdrawn from the task and group; and may seem to be self-punishing and work too hard. They value giving up all selfish desires. They may value noncooperation with authority; hard work, self-knowledge, and subjectivity; rejection of popularity; trust in the goodness of others; quiet contentment and taking it easy; love, faithfulness, and loyalty; the admission of failure and withdrawal; and suffering.

Positive versus negative directions represent behaviors considered friendly versus unfriendly. Individuals positive on sociability seem friendly and equalitarian. They may be agreeable and work cooperatively; may seem affectionate, likeable, and fun to be with; may seem extroverted, outgoing, and positive; may seem to look up to others and show trust; may act as purposeful democratic leaders; may seem entertaining, sociable, smiling, and warm; may seem gentle and willing to accept responsibility; and may seem quietly happy just to be with others. Individuals positive on sociability value equalitarianism and democratic participation. They may value popularity and social success; trust in the goodness of others; altruism, idealism, and cooperation; friendship, liberalism, and sharing; social solidarity and progress; making others feel happy; love, faithfulness, and loyalty; and quiet contentment and taking it easy.

Individuals negative on sociability show disagreement and seem to be negativistic. They may seem legalistic, insistent, and have to be right; may seem irritable, cynical, and uncooperative; may seem domineering, tough-minded, and powerful; may seem depressed, sad, and resentful; may seem authoritarian, controlling, and disapproving; may seem provocative, egocentric, and act like show-offs; may seem to be self-punishing and work too hard; and may seem alienated and withdraw from the task and group. Individuals negative on sociability value individual dissent and self-sufficiency. They may value determined restraint of desires; social nonconformity; tough-minded assertiveness; rejection of popularity; a powerful authority and law and order; rugged individualism and self-gratification; suffering; and admission of failure and withdrawal.

Forward versus backward directions represent behaviors considered instrumentally controlled and carefully regulated by intellectual attempts to keep the behavior on a pre-visualized track, to avoid making mistakes in order to solve a problem, or to maximize the effectiveness of work toward a pre-visualized goal versus emotionally expressive. Individuals forward on intellect seem analytical, task-oriented, and problem solving. They may work cooperatively with others; may seem legalistic and have to be right; may act like assertive business-like managers; may be obedient and work submissively; may act like purposeful democratic task leaders; may seem authoritarian, controlling, and disapproving; may seem gentle and willing to accept responsibility; and may seem self-punishing and work too hard. Individuals forward on intellect value established social beliefs and values. They may value altruism, idealism, and cooperation; value-determined restraint of desires; efficiency and strong effective management; hard work, self-knowledge, and subjectivity; social solidarity and progress; a powerful authority and law and order; love, faithfulness, and loyalty; and suffering.

Individuals backward on intellect show feelings and emotions. They may be affectionate, likeable, and fun to be with; irritable, cynical, and uncooperative; may joke around and be expressive and dramatic; may be afraid to try and doubt their own ability; may be provocative and egocentric and show off; may be entertaining, sociable, smiling, and warm; may be quietly happy just to be with others; and may be alienated and quit or withdraw. Individuals backward on intellect value unconventional beliefs and values. They may value friendship, liberalism, and sharing; social nonconformity; having a good time and self-expression; noncooperation with authority; making others feel happy; rugged individualism and self-gratification; quiet contentment and taking it easy; and admission of failure and withdrawal.

Each individual in a group makes a field diagram (See Figure 1) on which a point represents the location or image of each group member as well as the individual's wish, ought, expected, avoid, and reject images. Then a group average diagram is constructed. The field diagram shows the two dimensions, P-N, and F-B. These are the two dimensions you would see if you looked into the SYMLOG space from the top, that is, from the upward location looking directly downward. The location of the point representing the behavior of a member in the U-D dimension is indicated on the field diagram by drawing a circle around the point which is proportional in size to its location in the U-D dimension. The individual and group average field diagrams become the basis for discussion of group structure problems,

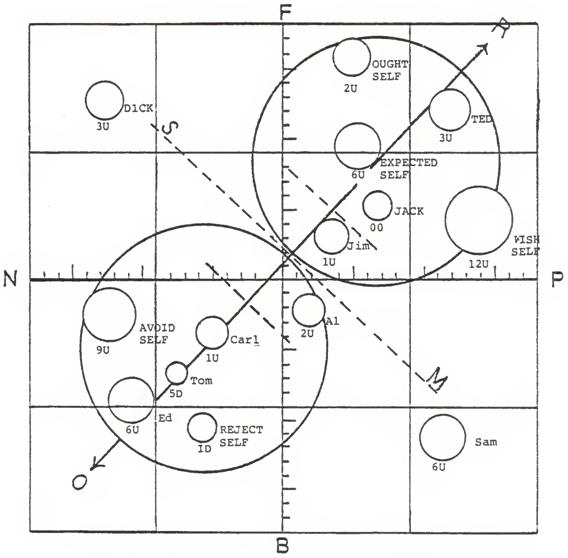

FIGURE 1

AN INDIVIDUAL FIELD DIAGRAM

potential problems, possible solutions, and decisions on how to proceed to improve group morale and individual satisfaction.

One of the most important questions that can be asked about a group is the degree to which it tends to hang together as a unified whole, or to break down into polarized subgroups. SYMLOG theory holds that most people tend to see the P types of behavior and values as opposite to the N types. People also tend to see the F types of behavior and values as opposite to the B types. Consequently, if individuals wish their behavior to approximate a location on one side of the space, they will also want to avoid behavior on the opposite side of the space. These desires will set up a polarization in their motivation, that is, a tendency to move their perception of themselves or self-image toward their desired location and away from the undesired location. They may do this by actually behaving in the ways desired, or, if this is too difficult for some reason or another, they may distort their perception of their actual behavior so as to see themselves in a way that is closer to their wishes, even though other people do not see them in that way. Individuals want to have images of fellow group members close to their self-image on the field diagram. If the images of one's own behavior or that of some group members fall outside the main cluster of desirable images, that is, outside one's reference circle, this tends to be felt as a problem. SYMLOG theory predicts that if such images are too far outside, individuals may tend to reject them, and cluster them together in their minds with undesired behaviors and values in an opposite circle. A line passing through the centers of the two clusters is referred to as the line of polarization. A line at right angles to the line of polarization is called the line of balance. The end of this line closest to the positive side of the diagram is the mediator end and the other end is the scapegoat end. A group member far out in the mediator direction on the line of balance has the potential of attracting simultaneously the members at both ends of the line of polarization. The conflict and hostility between the two polarized subgroups is neutralized and partly replaced by expression of positive feelings toward a common object of acceptance or attraction. A group member far out in the scapegoat direction on the line of balance is in potential danger of being rejected simultaneously by members at both ends of the line of polarization. The conflict and hostility between the two polarized subgroups is turned upon a common object of rejection, and the subgroups can unify temporarily by expressing their rejection of the scapegoat.

The assumption of SYMLOG theory is that the most dominant images are likely to draw the most attention of the perceiver, and to dominate his motivation. Two images that are close together suggest a tendency of the perceiver to transfer attitudes from one to the other or to regard them in the same way, as closely connected, unified, or identified with each other. Two images that are far removed from each other suggest a conflict or polarization between the two in the mind of the perceiver. In such a polarization of attitudes in the mind of the perceiver, we also then expect there may be a tendency to identify the best elements of the self-image with the polar image regarded as desirable, and to project or over-attribute undesirable traits to the other, thus exaggerating the differences between the two polar images.

The unifications and polarizations of images in a particular perceiver's mind may well result in distortion of the location of the self-image and the images of other group members on the diagram due to motivational needs of the perceiver. If so, when he later discusses the diagrams, he will see that other members' diagrams will locate the image differently. But each member tends to distort somewhat. There is no perfectly objective diagram. Usually the best estimate of the way a group member would be seen by observers outside the group is the average of the way all group members see that member. When the group members compare and discuss their individual diagrams, they may see they differ from the group average perception, and ponder the reasons, particularly in relation to the location of subjective images of desired and undesired behavior. It is often helpful also, for each group member to try to locate, in terms of background experience, the original persons who served as models of these subjective images (wish, ought, actual, avoid, and reject).

If there is reasonably good group agreement on the identity of dominant images, the group can discuss whether the attention of the group is being dominated by one or a few members or subjective images or combination of members and subjective images. Some of the members or important values may be dropping out of sight because of the amount of attention demanded by the most dominant images. Members may want change if this is the situation.

Images that are far removed from each other are likely to be polarized. The general assumption is that images that are far apart from each other, even though they are not dominant, and though they may not be separated along the main line of polarization, are nevertheless likely to be felt by the perceiver to be in some conflict with each other, and sooner or later may become the focus of a polarization or overt conflict. If there are members who are far removed who have not yet come into overt conflict with each other, there is potential for conflict in the group which might best be brought into the open and discussed.

Images of wishes common to a number of group members, or common feelings of obligation or duty (ought images), common feelings of rejection, common desires to avoid, as well as convergence on common actual values, may serve as well as the images of particular actual group members, as the focus of emotional processes in groups. Thus, the members of a group may be unified in their images of each other, but maintain this unity by focusing their attention on images of things other than group members - images that serve their common wishes, fears, avoidances, rejections, as well as their common values. Thus, whether the images of the group members as such on the group average diagram appear to be unified or polarized, it is desirable to examine the part played by other images in the minds of group members. These images may serve as common objects of opposition, of scapegoating, as objects of mediation as well as objects of reference.

The swing area is an area on each side of the intersection of the line of polarization and the line of balance. It can be thought of as a kind of dead center between the two poles that repel each other. The image of a person in this area falls between the two poles in the mind of the perceiver, not clearly identified with the cluster of images on either side, though perhaps leaning to one side or the other. A group might discuss whether a member in the swing area is in personal conflict about whether to go one way or the other, whether the member is about to drop out of the group because of conflict or lack of involvement with the members of the group or either subgroup, or whether the person ends up in the middle of the group average diagram because other members do not agree on his location and their disagreements cancel out.

Thus, Bales has developed a system, grounded in observation of actual behavior, that permits understanding of a group in terms of group dynamics and individual personalities and provides potential for improving group morale and individual satisfaction. Group dynamics consists of the interplay among members of the total field of common images, those of non-group member objects, as well as those of group members. Personality dynamics consists of the interplay of all the images in the mind of each given individual. The behavior one can observe in a group is a function of both the interplay of the personality dynamics of each of the members taken separately and the group dynamics of the constellation of common images that comes into prominence when the members interact and communicate with each other.

Bales' SYMLOG system is strong in empirical grounding. It grew inductively from a long continued effort to understand social interaction from observation, to construct measuring instruments for recording and analyzing the dynamics of small groups, and to provide for feedback of useful information for utilization by participants. It has been a grounded theory (see Glaser & Strauss, 1967) from the start.

Bales' SYMLOG system is also strong in theoretical connections. The system is an immediate outgrowth of earlier work by Bales (1950, 1970) and contains elements from a considerable number of theories in psychology, sociology, and related fields. Elements come from the general fields of personality study, clinical psychology, individual and group psychotherapy, group training, organization development, social group work, and family therapy. Assumptions about motivation, the general nature of personality, powers of the ego, mechanisms of ego defense, and interpretation come from psychoanalytic theory of S. Freud (1933/1965) and A. Freud (1946). Concepts of the nature of the individual perceptual evaluative field derive partly from the gestalt psychology of Lewinian field theory (Lewin, 1951) and the group dynamics school (Cartwright & Zander, 1968). Polarization and unification theory is related to social cognition balance theory of Newcomb (1953) and Heider (1958), congruity theory (Osgood & Tannenbaum, 1955), dissonance theory (Festinger, 1957), consistency theory (Abelson, Aronson, McGuire, Newcomb, Rosenberg, & Tannenbaum, 1968), and attribution theory (Kelley, 1971). Self-image is related to symbolic interaction theory (Blumer, 1969; Goffman, 1959; Mead, 1934). Role differentiation concepts come from small group interaction theory (Hare, 1976; Hare, Borgatta, & Bales, 1965; Shaw, 1971). Concepts of interaction costs and benefits derive from social exchange theory (Blau, 1964, 1968; Homans, 1961; Thibaut & Kelly, 1959), reference group theory (Merton & Kitt, 1950), and social evaluation theory (Pettigrew, 1967). The system resolves the conflict between structural-functional theory (Parsons, 1951) and conflict theory (Dahrendorf, 1959) with recognition of both unification and polarization. Polarizations are similar to family triangles (Bowen, 1971; Minuchin, 1974).

Bales' Behavioral Factors and Demographic Variables

Bales (Bales & Cohen, 1979, p. 226) states that perceptions of individuals in a group may be influenced by age, sex, place of origin, residence, race, religion, social class, family roles, health, physical energy, personal appearance, disease, disability, education, occupation, special interests, abilities, experience, intelligence, sophistication, wealth, formal rank, social status of family or friends, social connections, citizenship, criminal record, escapes, notoriety, reputation, and community services. Bales (1970, p. 46) has found that in his academic self-analytic groups, women are further downward, considerably more positive, and slightly backward from men. Similar differences have been observed in jury groups (Strodtbeck & Mann, 1956). It must be pointed out however that Bales' groups were assigned male "instructors" and female "coinstructors" and he seemed to think of the males as task leaders and the females as social leaders. Bales (Bales & Cohen, 1979, p. 18) states that he is often a member of one of his groups and admits some responsibility for behavior studied and interpreted.

Absenteeism and Organizational Health

A high rate of absenteeism may be a sign of some problem within an organization. Both Herzberg (1966, p. 113) and Vroom (1964, p. 79) found a negative correlation between absenteeism and worker morale. Mann and Baumgartel (1953, p. 47) found that workers with low absence rates were more satisfied with their jobs, supervisors, and work associates. According to Argyris (1964, p. 59), absenteeism can be an adaptive activity of the employee who wishes to avoid frustrations. Kornhauser (1962, p. 26) found that people who have a high rate of absenteeism tend to be frustrated by non-challenging routine work and poor supervision. Likert (1967, p. 85) noted that excessive absenteeism is lowest under a participative approach to management. Hersey and Blanchard (1972, p. 74) cited absenteeism as one of the indicators of deterioration of work attitudes. Ronan and Prien (1971, p. 67) found that excessive absenteeism indicates that an employee will eventually leave the company. Negative relationships between absenteeism and teacher morale were found by Slick (1974), Coller (1975), and Douglas (1976). Reviews analyzing the job satisfaction-absenteeism relationship by Brayfield and Crockett (1955), Herzberg, Muasner, Peterson, and Capwell (1957), Vroom (1964), Gibson (1966), Porter and Steers (1973), and Muchinsky (1977) support the conclusion that there is a two to one chance of finding a negative relationship.

However, Bridges (1980, p. 42) points out that job satisfaction is not a major factor in absenteeism. Although the relationship between job satisfaction and absenteeism is consistently found to be negative, rarely do the correlations exceed -.30 thus the shared variance between the two variables is less than 10 percent and the unexplained variance is nine times greater than the explained.

The pain-reductive hypothesis underlying much research regarding absence from the workplace is based on a rather simplistic view of absence. Temporary withdrawal from the workplace is conceived of as a pain-reductive response on the part of workers to their work situation. Porter and Steers (1973) consider the assumption faulty that each of the various sources of satisfaction such as supervision, pay, co-workers, and the work itself, is of equal valence to all workers. Lortie (1975) found that psychic rewards were more strongly related to teacher absenteeism than extrinsic rewards. Bridges (1980) has found that job design may condition the relationship between job satisfaction and absenteeism and that the relationship is more apt to exist under a condition of high work interdependence than under moderate or low interdependence.

Classification of Absences

Researchers on absenteeism are hampered by the difficulty in classifying absences as voluntary or involuntary. The causes of absenteeism can be viewed as falling along a continuum with involuntary absenteeism at one end and voluntary absenteeism at the other end (Stecker, 1972, p. 8). An involuntary absence would occur in the case of an employee knocked unconscious while a voluntary absence would occur if the employee chose to go shopping. Causes for most absences are not clear cut and fall somewhere along the continuum. Therefore, it is difficult to classify absences as truly involuntary or voluntary. One cannot assume that an absence is unavoidable simply because a worker reports an illness. As Backenheimer (1967, p. 3) pointed out, the same degree of illness in two different people may keep one off the job and not slow the other one down at all. Hedges (1973, p. 29) examined data on absences available from the Current Population Survey conducted by the Bureau of Census and concluded that she could not distinguish unavoidable absenteeism from avoidable absenteeism. Castetter (1976, p. 450) noted that reasons for teacher absenteeism are almost as varied and fanciful as the excuses given in court for traffic violations.

Definitions of Absenteeism

Researchers on absenteeism are hampered by the difficulty in defining absenteeism and the inconsistency among definitions from one study to the next. A myriad of definitions for absenteeism exist in the research literature. Gaudet (1963) reported the use of at least 41 different measures in research he had reviewed. Muchinsky (1977) also reported extreme variability in absence definitions. Absenteeism may be defined as total number of days away from the job, absence frequency regardless of length of each absence, absences when the boss lacks advance notice, number of days absent excluding absences of more than five consecutive days, frequency of absences of fewer than five days, or frequency of one-day absences. In this study, absenteeism is defined as number of days absent for personal reasons excluding absences of more than 10 consecutive days for health care. Reviewers of the literature generally assume that the definitions of absenteeism are conceptually comparable.

Even if different definitions were conceptually comparable, they have shown widely differing empirical stability. Chadwick-Jones, Brown, Nicholson, and Sheppard (1971) found extreme variability in test-retest reliability coefficients in an industrial setting. Huse and Taylor (1962) examined reliabilities of measures of four definitions of absenteeism when collecting data on 393 truck drivers for a large oil company during the two years of 1957 and 1958. Total number of days absent had a reliability of .23 while absences of three days or longer had a .19 reliability. Absence frequency with a .61 coefficient had the highest reliability while frequency of one-day absences had a reliability of .52 thus it was concluded that only the latter two definitions had sufficient reliability to be used as criterion measures. Recognition of the fact that absenteeism has a multitude of definitions and that measures vary in reliability is necessary for realistic review of the research literature on absenteeism.

Measures of Organizational Health

Researchers studying absenteeism and organizational health have generally relied on workers to rate their own levels of satisfaction or morale along specific dimensions. Job satisfaction has been measured with various instruments. Bridges (1980) used the Job Descriptive Index developed by Smith, Kendall, and Hulin (1969). According to Price (1972), this index is the most reliable and valid measure of job satisfaction in current use. Four dimensions of job satisfaction measured are satisfaction with the work itself, satisfaction with pay, satisfaction with co-workers, and satisfaction with supervision. Teacher morale has often been measured by the Purdue Teacher Opinionnaire developed by Rempel and Bentley (1967). The PTO contains 100 items which measure 10 dimensions which are teacher rapport with the principal, satisfaction with teaching, rapport among teachers, teacher salary, teacher load, curriculum issues, teacher status, community support of education, school facilities and services, and community pressures. Such measures of satisfaction and morale lack empirical and theoretical connections to organizational health which are provided by Bales' measures of behavioral factors.

Absenteeism and Demographic Variables

Research is reviewed on the relationship between absenteeism and personal demographic variables which include age, gender, marital status, educational level, and years of teaching experience. Then research is reviewed on the relationship between absenteeism and situational demographic variables which include type of school and work unit size.

Personal Demographic Variables and Absenteeism

No consistent relationship between age and absenteeism has been found. Researchers have reported positive relationships, negative relationships, curvilinear relationships in which middleaged workers were absent less, and no relationships at all.

Positive relationships have been found by Cooper and Payne (1965), Hill (1967), Campbell (1970), and Weaver and Holmes (1972). Negative relationships have been found by Weaver (1970), Hedges (1973), Sharples (1973), Nicholson and Goodge (1976), Bernardin (1977), and Johns (1978). Results may differ depending on how absenteeism is defined. For example, Garrison and Muchinsky (1977) found a positive relationship between age and paid absences of public utility employees but a negative relationship between age and unpaid absences. Curvilinear relationships were found by Isambert-Jamati (1962) and Taylor (1979). No relationships were found by Sellett (1964) and Flanagan, Strauss, and Ulman (1974).

In studies of teacher absences, a positive relationship was found by Marchant (1976), a curvilinear relationship was found by Lee (1960), no relationships were found by Bundren (1974), Coller (1975), Redmond (1978), and Bridges and Hallinan (1978) while Marlin (1976) found that teachers in the 31-35 age category were absent the most.

Gender is not a good predictor of number of days lost. Some research data indicate that female employees have more frequent absences of shorter duration than do male employees who are out for more days at a time. Hedges (1973, 1975) found that data in the Bureau of Labor Statistics Current Population Surveys revealed an absence rate for females nearly twice that for males during 1972 and 1974. Both Hedges (1977) and Taylor (1979) found more frequent absences for females but greater total hours lost for males. No clear relationship between gender of production workers and absenteeism was found by Johns (1978). Weaver (1970), Martin (1971), Raouf (1973), Sharples (1973), Flanagan, Strauss, and Ulman (1974), Goble (1976), and Garrison and Muchinsky (1977) found that female workers had a higher absence rate.

No relationships between absenteeism of educators and gender were found by Manganiello (1972), Bundren (1974), Marchant (1976), Douglas (1976), nor Bridges and Hallinan (1978). Female teachers were found to be absent more days in 56 Pennsylvania districts during 1968-1969 and 1969-1970 school years by the Philadelphia Suburban School Study

Council (1970). Marlin's study (1976) or 425 teachers in a semi-rural school system found similar results as did the Pennsylvania School Boards Association (1978); a Dade County, Florida, Public Schools Office of Management and Budget study (1978); Redmond's study (1978) of the Fort Madison, Iowa, Community School District; and Sylwester's study (1979) of 335 Oregon elementary and secondary school teachers and administrators. The latter study involves workers at a lower level who are primarily female and workers at a higher level who are primarily male.

As the United States Department of Labor Statistics Report warned, occupation is a very critical factor in the relationship between gender and absenteeism. Females tend to be in lower responsibility and lower pay positions, and high rates of absence are associated with low responsibility and low pay. Hedges (1973), a Bureau of Labor Statistics economist, found that gender differences in absence rates narrow when comparisons are made within a particular occupation group even when men within the group occupy the better paying jobs. Isambert-Jamati (1962) found that highly-trained women in responsible positions are seldom absent, even if they have several children to raise.

No consistent relationship between marital status and absenteeism has been found. Hedges (1973) found that single males were absent more than married males, but married females were absent more than single ones. Taylor (1979) found the same situation when he examined Bureau of Labor

Statistics data. Sharples (1973) found that both male and female married civil service workers in Ohio were absent more than single ones while Goble (1976) found that single processing plant workers were absent more than married workers. Garrison and Muchinsky (1977) found marital status to be a significant negative predictor of absence without pay, but not with pay, in a study of accounting workers. No significant correlations between marital status and absence were found by Martin (1971), Waters and Roach (1971, 1973), Nicholson and Goodge (1976), nor Johns (1978).

Lee (1960) found that married Wichita, Kansas teachers were absent more, but Coller (1975) found that single Livonia, Michigan teachers were absent more. Marlin (1976) found that married teachers in a semi-rural Mississippi system were absent more. No relationship between marital status and teacher absenteeism was found in the Bundren study (1974) in Clark County, Nevada; the Marchant study (1976) in Richmond, Virginia; the Redmond study (1978) in Iowa; nor the Bridges and Hallinan study (1978) in California and Wisconsin.

No consistent relationship between educational level and absenteeism has been found. Raouf (1973) found that workers at several Windsor, Ontario companies who did not have high school diplomas were absent more than others. However, Sharples (1973) found that female classified civil service personnel in Ohio with more education were absent more. Martin (1971) found that light engineering workers with more education had more absences and Goble (1976) found the same situation existed with processing plant workers. Taylor (1979) examined data from the Current Population Survey of the Bureau of Labor Statistics and found a negative relationship between educational level and absenteeism in the United States work force in May 1978. As the level of education increased, absenteeism decreased. Researchers who found no relationship between educational level and absenteeism include Waters and Roach (1971, 1973), Weaver and Holmes (1972), and Johns (1978).

Lee (1960) found that teachers in Chicago, Illinois public schools with more education were absent less during February 1960. Douglas (1976) found academic degree to be a predictor of absenteeism when added to eight other variables in a stepwise regression. However, Redmond (1978) found no correlation between educational level and absenteeism of professional personnel in the Fort Madison, Iowa, Community School District.

No consistent relationship between employment experience and absenteeism has been found. Martin (1971) found that male British light engineering workers with more experience were absent more but there was no significant correlation for females. Waters and Roach found a negative relationship between tenure and absence in one study of female clerical workers but no relationship in a later study (1971, 1973). Weaver and Holmes (1972) found no correlation in his study of female government employees. Raouf (1973) found less absenteeism after the third year on the job among factory workers in Windsor, Ontario. Sharples (1973) found that female classified civil service personnel at Ohio University with the most absences stayed fewer years on the job. Nicholson and Goodge (1976) found that female food processing employees with fewer years on the job had more absences. Bernardin (1976) found that male white-collar sales workers who were employed longer were absent less when the effects of pay and age were partialled out. Garrison and Muchinsky (1977) found a positive relationship between tenure and paid absences of accounting workers who became eligible for more paid absences with more tenure. Johns (1978) found a negative relationship between tenure and absences of operative workers in a manufacturing plant.

In studies of the relationship between tenure and absenteeism of educational personnel, Gibson and Lafornara (1972) found a negative relationship, and Coller (1975) found a curvilinear relationship with more absences in the middle years. Marlin (1976) reported a positive relationship as did Douglas (1976). No relationship was found by Manganiello (1972), Bundren (1974), Marchant (1976), nor Redmond (1978).

Situational Demographic Variables and Absenteeism

There is a relationship between type of school and absenteeism. Douglas (1976) found that inner-city versus suburban school was a predictor of absenteeism when added to other variables in a stepwise regression. According to the State of New York Office of Education Performance Review (1974), the absence rate for New York City teachers in Title I elementary schools during the 1972-1973 school year was 29 percent higher than in non-Title I elementary schools. Shaw (1980) found that teachers in Title I schools had a higher rate of absenteeism.

There is a positive relationship between work unit size and worker absenteeism. A positive relationship between work unit size and worker absenteeism has been found by Indik and Seashore (1961) who studied 91 groups of factory workers, Indik (1965) who studied 32 groups of delivery drivers, Ingham (1970) who studied eight British firms, and Kovach (1976). However, Raouf (1973) found no significant relationship between company size and absence rates of workers in Windsor, Ontario.

Bundren (1974) reported that in Clark County, Nevada, size of the faculty was not a significant predictor of teacher absenteeism. Marchant (1976) found no significant correlation between school size and absence rates of a sample of Richmond, Virginia, elementary school teachers. However, Bridges and Hallinan (1978) found a positive correlation between subunit size and absenteeism in their study of teacher absenteeism in 57 California and Wisconsin elementary schools. Staff absenteeism was lowest in the smallest elementary schools during 1959-1960 in Chicago public schools (Chicago Board of Education, 1960).

CHAPTER III

PROCEDURES

Introduction

The purpose of this chapter is to present procedures used in the study. Described are the setting of the study, the selection of the sample population, variables explored, instruments used, collection and compilation of data, and statistical analysis of data.

Setting of the Study

In Florida, there are 67 counties and 67 county public school districts. Schools in seven Central Florida school districts were involved in this study. School districts included Brevard, Lake, Marion, Orange, Osceola, Seminole, and Volusia. Data describing each county appear in Table 1. Data presented by county and for the State in regard to land area in square miles are from the Florida Statistical Abstract 1972. The 1979 average personal income in dollars per capita, 1980 population, and 1980 public school enrollment are from the Florida Statistical Abstract 1981. These seven counties cover a total of 7,157.9 square miles with a 1980 population of 1,460,000 and public school enrollment of 259,787.

TABLE 1

SETTING OF THE STUDY

School District	1979 Average Personal Income $ Per Cap.	Land Area In Sq. Miles	1980 Population	1980 Public School Pupils Enrolled
Brevard County	8401	1,011.0	273,000	50,560
Lake County	8257	960.6	104,900	18,401
Marion County	6549	1,599.5	122,500	22,250
Orange County	9087	910.0	471,700	87,874
Osceola County	6396	1,310.0	49,300	8,830
Seminole County	6854	304.9	179,800	36,135
Volusia County	7602	1,061.9	258,800	35,737
Total		7,158	1,460,000	259,787
Florida Total	8521	54,136	9,739,992	1,613,434

The Central Florida area has an economy based on tourism, agriculture, and some light industry. Brevard County contains the Kennedy Space Center at Cape Canaveral. Lake County is primarily rural. Marion County contains the city of Ocala and features the tourist attraction, Silver

Springs. Orange County contains the city of Orlando which is a large urban area and shares with Osceola County to the south, the renown Disney World which attracts tourists from all over the world. Seminole County is an agricultural and light industry area. Volusia County features Daytona Beach and miles of beach as well as retirement areas and agriculture, producing fern and citrus products.

Financial support for Florida schools is below the national mean. When compared with other states, Florida ranks 37th on teacher salaries as of fall 1982 according to the National Education Association. The average salary in Florida during the 1981-1982 school year was $16,907 which was about $2,000 less than the national average. Per pupil expenditure ranked 38th during the 1978-1970 school year according to the 1982 World Almanac. Many public school buildings are old and lack air conditioning.

In 1981, the Governor and Cabinet, as the State Board of Education, approved a statement of a goal to boost Florida schools to the top 25 percent in the nation within five years; however, no significant increase in funding for education has yet been realized. Legislative support of education as measured by fiscal effort and expenditures reveals a long-term conservatism toward educational financing. Evidence of conservatism in regard to educators who are primarily women is provided by the negative vote on the Equal Rights Amendment in June of 1982. In the 67 county public school districts of Florida, there is not even one female superintendent.

Selection of the Sample Population

The principals of the 40 public high schools in the seven Central Florida counties received information about the study by mail. Those principals who wished to allow their teachers to participate returned a postcard indicating how many teachers were in the English, math, science, and social studies departments. A total of 13 principals volunteered to cooperate so there was 32.5 percent principal participation. Each principal was sent a code sheet to complete and duplicate for each teacher and a packet for each teacher. The packet contained a letter explaining the purpose of the study and providing instructions on completing forms, an information sheet, five adjective rating forms, a stamped and addressed envelope, and a $2 check. Appendix A contains a copy of the letter to principals, the code sheet, the letter to teachers, the information sheet, and the adjective rating form.

In order to encourage teacher participation, much consideration was given to the respect of teacher privacy and time. Code numbers were used on forms for protection of anonymity. The writer estimated that forms would require 15 minutes to complete so compensation of $2 was offered. Teachers decided individually to participate by returning the materials. They were very cooperative and many wrote comments expressing thanks for the check, expressing interest in seeing results of the study, and extending kind words of encouragement to the researcher. In the few cases where there was not at least 80 percent return from a department, the forms received were discarded and the departments deleted from the study. There were 45 departmental groups included and five deleted. When all teachers in a group included in the study did not return forms, the principal was asked to complete and return an information sheet for the one or two teachers who did not do so. Table 2 shows the number of schools and academic departments from each county participating in the study.

Variables Explored in the Study

Data on 12 variables were obtained from the sample of 330 Central Florida high school teachers. Variables included eight demographic variables, Bales' three behavioral factors, and absenteeism.

Demographic Variables

The five personal demographic variables included age, gender, marital status, education, and teaching experience. While age and teaching experience were quantitative variables, the qualitative variables necessitated the

TABLE 2

SELECTION OF THE SAMPLE POPULATION

County	Number of Public High Schools in County	Number of Public High Schools in Study	Teachers in Study	Departments			
				Eng	Math	Sci	Soc
Brevard	10	2	61	2	2	2	1
Lake	4	2	46	2	2	2	2
Marion	5	1	20	1	1	-	-
Orange	9	4	86	3	3	4	3
Osceola	2	1	34	1	1	1	1
Seminole	5	1	39	1	1	1	1
Volusia	5	2	44	2	2	2	1
Totals	40	13	330	12	12	12	9

formation of categories. Gender was categorized as female or male while marital status was categorized as married or single. Education was expressed by indicating whether the highest degree obtained was a bachelor's, master's, specialist, or doctoral degree.

The three situational demographic variables included school location, school enrollment, and academic department. Enrollment was a quantitative variable. School location was categorized city, suburban, or rural. Academic department was English, math, science, or social studies. School location categories were not precisely defined but subjects were able to categorize school locations without hesitation by considering whether schools were in close proximity to business concerns, residential areas, or rural areas.

Group make-up on demographic variables was described using means of quantitative variables. Gender and marital status became percent of the group female and percent married. Education became mean number of degrees. Location and department remained qualitative variables.

Bales' Behavioral Factors

These three quantitative variables included power, sociability, and intellect. Scores on each variable were either positive or negative depending on whether individual behavior was perceived by colleagues as being more dominant or submissive, more friendly or unfriendly, and more intellectual or emotional. Means were used to describe each group.

Absenteeism

This quantitative variable was defined as sick leave days used during the 1981-1982 school year till Easter for personal reasons. Not included were days that were part of long-term absences of more than 10 consecutive days for surgery, maternity, and such. A mean was used to describe each group.

Instruments Used for Data Collection

Each teacher was asked to fill in an information sheet (Appendix A) with personal demographic data, situational demographic data, and the number of sick leave absences for the 1981-1982 school year till Easter. Behavioral factor data were obtained on Bales' adjective rating form (Appendix A) which was used in this study with the permission of Bales and the MacMillan Publishing Company, Inc. Each teacher was asked to fill out adjective rating forms on five other teachers in the department. Thus, if all departmental members returned forms, there would be five forms filled out on each teacher. Data from the forms filled out on a particular teacher were averaged to obtain a score for the teacher on power, sociability, and intellect factors. Power is measured along an up-down, U-D continuum. Sociability is measured along a positive-negative, P-N continuum. Intellect is measured along a F-B, forward-backward continuum. Bales' form (Bales & Cohen, 1979, p. 21) requires 26 responses which indicate whether an individual is perceived as: never, rarely, sometimes, often, or always demonstrating 26 particular behaviors. Each of the 26 items is related to one, two, or three of the factors. For example, whether a person is perceived as active, dominant, and talking a lot, never, rarely, sometimes, often, or always would indicate how high up on power he is perceived to be. Whether a person is perceived as extroverted, outgoing, and positive, never, rarely, sometimes, often, or always would indicate both how high up on power he is perceived to be and how positive on sociability he is perceived to be. Whether a person is perceived as a purposeful democratic task leader, never, rarely, sometimes, often, or always would indicate how high up on power he is perceived to be, how positive on sociability he is perceived to be, and how far forward on intellect he is perceived to be.

Data were collected (Bales & Cohen, 1979, p. 296) to determine validity and reliability of an earlier adjective rating form then that form was revised to increase validity and reliability. The improved form is used in the present study.

Validity

Validity of the adjective rating form depends on how well the form measures what it is intended to measure. The theoretical construct of Bales' SYMLOG three-dimensional system implies that, in empirical measurements of small groups, factor analyses of the adjective items used to measure the 26 SYMLOG vectors should yield three orthogonal factors which account for a large percentage of the variance in perceptions of acts of others (Bales & Cohen, 1979, p. 296). A separate factor analysis was performed for each of three groups of raters which found that in all three cases, the expected three factors U-D, P-N, and F-B emerged strongly and accounted for approximately 85 percent of the variance.

The theoretical construct of the SYMLOG space assumes that the three dimensions are theoretically orthogonal or logically independent of each other although they may be correlated to some degree in particular ways that are diagnostic of particular populations of persons rated or particular types of raters (Bales & Cohen, 1979, p. 297). The three dimensions were found to be nearly orthogonal to each other. The U-D dimension was correlated positively with the P-N dimension with an average correlation of .20 and with the F-B dimension with an average correlation of about .18 over the three groups of raters. The P-N dimension was correlated negatively with the F-B dimension with an average correlation of -.13.

The theoretical construct of the SYMLOG space of three orthogonal dimensions implies that empirical measures of the opposite poles of each of the dimensions in a given population will be highly negatively correlated with each other. Scales made by adding together the nine items designed to measure each of the directions U, D, P, N, F, B found the polar ends of each of the three dimensions to be highly negatively correlated with each other (Bales & Cohen, 1979, p. 296). Over the groups of raters, the P and N poles had an average correlation of -.88, the F and B poles had an average correlation of -.68, and the U and D poles had a correlation of -.67. It is expected that the revised adjective rating form used in this study has higher negative correlations between poles.

The item-to-scale correlations for all three rater groups were similar. Results from one group of raters appear in Table 3 (Bales & Cohen, 1979, p. 249) which is in this dissertation with the permission of the MacMillan Publishing Company, Inc. The poor items, such as DPB, which did not measure what they were supposed to measure, were reconstructed for the currently used form.

Reliability

Reliability or consistency of results was determined by splitting unexperienced raters using the form into two groups of 16 raters (Bales & Cohen, 1979, p. 297). Ratings produced by each group of raters on each item were summed for each person rated. Correlations for adjective items ranged from .74 to .93, with a mean of .88 across all 26 adjective items. When the items were added into the six summary scales, U, D, P, N, F, B, the reliability coefficients expressing agreement between groups of raters ranged from .95 to .99 and when the six scales were added together into the three-dimensional scales U-D, P-N, and F-B, the coefficients were all .98 or .99. Bales determined that a level of .80 reliability for the nine-item one-pole scales, U, D, P, N, F, B, could be reached with a group of six or seven raters added together while only three to five

TABLE 3

ITEM-TO-SCALE CORRELATIONS FOR BALES' 26 ADJECTIVE ITEMS

			U	D	P	N	F	B	U-D	P-N	F-B
1.	U	Active, extroverted, self-confident	.939	−.736	.305	−.068	.372	.110	.945	.205	.166
2.	UP	Outgoing, open, sociable	.550	−.140	.840	−.564	−.101	.630	.406	.741	−.387
3.	UPF	Shows friendly, democratic leadership	.405	−.214	.729	−.685	.612	−.111	.356	.734	.426
4.	UF	Businesslike, impersonal, managerial	.212	−.332	−.373	.254	.759	−.754	.297	−.331	.846
5.	UNF	Bossy, disapproving, authoritarian	.435	−.356	−.615	.773	.347	−.288	.446	−.711	.347
6.	UN	Dominating, competitive, tough	.559	−.490	−.506	.661	.484	−.324	.589	−.597	.459
7.	UNB	Showing off, self-centered, impulsive	.334	−.239	−.281	.520	−.577	.601	.330	−.403	−.658
8.	UB	Humorous, entertaining, dramatic	.618	−.190	.604	−.277	−.294	.815	.472	.472	−.599
9.	UPB	Warm, supportive, nurturant	.211	.121	.938	−.817	.078	.382	.067	.914	−.151
10.	P	Friendly, informal, equalitarian	.325	.057	.930	−.718	−.082	.577	.169	.864	−.348
11.	PF	Attentive, agreeable, cooperative	.211	.015	.917	−.901	.325	.080	.121	.942	.155
12.	F	Analytical, task oriented, problem-solving	.354	−.329	−.102	.089	.922	−.874	.383	−.099	.903
13.	NF	Conscientious, controlled, persistent	.495	−.487	−.048	.066	.894	−.635	.548	−.058	.866
14	N	Unfriendly, negativistic, individualistic	−.149	.026	−.897	.925	−.235	−.077	−.104	−.942	−.102
15.	NB	Contrary, noncompliant, disrespectful	−.165	−.055	−.796	.829	−.456	.107	−.073	−.840	−.329
16.	B	Emotional, expressive changeable	.498	−.021	.256	.115	−.138	.648	.314	.091	−.418
17.	PB	Affectionate, likeable, fun to be with	.325	−.003	.947	−.787	−.062	.559	.199	.906	−.326
18.	DP	Trusting, calm, appreciative	.104	.158	.918	−.877	.192	.192	−.017	.931	.016
19.	DPF	Gentle, respectful, responsible	.065	.156	.846	−.860	.392	−.006	−.040	.883	.238
20.	DF	Cautious, submissive, hardworking	−.149	.252	.167	−.307	.732	−.595	−.218	.238	.748
21.	DNF	Self-sacrificing, complaining, martyred	−.215	.475	−.621	.797	−.153	.107	−.372	−.775	−.148
22.	DN	Resentful, depressed, rejecting	−.457	.518	−.785	.830	−.260	−.018	−.541	−.834	−.148
23.	DNB	Frustrated, discouraged, withdrawing	−.613	.698	−.650	.649	−.333	.062	−.727	−.673	−.232
24.	DB	Anxious, fearful, withholding	−.665	.831	−.391	.361	−.348	.168	−.826	−.391	.296
25.	DPB	Grinning, pleased, happy	.444	−.162	.802	−.616	−.230	.657	.353	.744	−.479
26.	D	Passive, introverted, inhibited	−.863	.730	−.242	.001	−.408	−.026	−.896	−.138	−.232

NOTE: From "SYMLOG: A System for the Multiple Level Observation of Groups" by Bales & Cohen, 1979, p. 249. Copyright 1979 by The Free Press. Reprinted by permission.

raters would be needed for eighteen-item two-pole scales, U-D, P-N, and F-B.

The adjective rating form used in this study is a weighted version introduced to increase the reliability of the summary scale (Bales & Cohen, 1979, p. 408). Items measuring only one dimension should have all of their variance accounted for by that dimension. Those measuring two dimensions should have half of their variance accounted for by each dimension, and items measuring all three dimensions should have one-third of their variance accounted for by each of the three dimensions. Each item measuring one dimension has a weight of six. Each item measuring two dimensions has a weight of three, and each item measuring three dimensions has a weight of two. Weighted scale reliabilities were found to be higher than those of the unweighted scales since singly named items that are most heavily weighted have the largest item-to-scale correlations overall. Also the doubly named items have higher correlations than the triply named items.

An attempt was made to secure later data in regard to validity and reliability of the weighted revised adjective rating form. However, according to Dr. Bales (personal communication, 1982), later data are not available but the form has been used by him and others "regularly...with every indication of satisfactory reliability and validity."

Collection and Compilation of the Data

Each teacher subject was asked to mail to the writer an information sheet indicating school location, school enrollment, and academic department as well as age, gender, marital status, highest degree earned, number of years of teaching experience, and number of days of sick leave used during the 1981-1982 school year up until Easter, not including days that were part of long-term absences of more than 10 consecutive days for surgery, maternity, and such. Each teacher subject was also asked to return five adjective rating forms completed for five specific members of the department.

When a principal decided to allow his teachers to participate, he returned a postcard to the writer indicating the number of teachers in each of the English, math, science, and social studies departments. He was then sent a code sheet with a code number and a blank for each teacher so he could write names in the blanks and duplicate the sheet for teacher use. If the principal had indicated that there were 10 teachers in each department, he would be provided with a code sheet with 10 blanks for names of English teachers designated as E1 through E10, 10 blanks for names of math teachers designated as M1 through M10, 10 blanks for names of science teachers designated as S1 through S10, and 10 blanks for names of social studies teachers designated as H1 through H10.

The writer sent to the principal a packet for each teacher with his or her code number appearing on the cover letter. Each packet contained adjective rating forms for five other teachers in the department with code numbers appearing in the upper right hand corners. Thus, when the writer knew how many teachers were in a department, each packet could be prepared with five different adjective rating forms so that there could be the same number of forms filled in on each teacher if all teachers in the department participated. The writer had decided to ask each teacher to fill in forms on only five teachers rather than on all the teachers in the department to avoid teacher fatigue and to encourage participation. According to Bales, satisfactory reliability would result with three or more forms filled in on each teacher. When at least 80 percent of teachers in a department returned adjective rating forms, the principal was asked to complete and return an information sheet on any teachers who did not participate. Departments with less than 80 percent participation were deleted from the study.

Each adjective rating form was scored by multiplying each of the 26 answer values by the specified weight and entering the product in the appropriate dimension direction boxes provided on the form. A sum was calculated for the six columns for dimension directions. Then a summary position for each dimension was determined by subtracting the smaller direction value from the larger direction value and was labeled with the direction name of the larger direction value. On the power dimension, a summary position labeled U was assigned a positive value while D was assigned a negative value. On the sociability dimension, a summary position labeled P was assigned a positive value while N was assigned a negative value. On the intellect dimension, a summary position labeled F was assigned a positive value while B was assigned a negative value. A sample adjective rating form which was completed by a subject then scored by the writer appears in Appendix B.

A matrix was prepared for each departmental group. A sample matrix appears in Appendix B. Summary positions on the three dimensions for each individual rated were entered in the matrix then an average position for each individual was determined. This individual average position reflected the way the teacher was perceived on the average by other teachers in the department.

Individual average positions were used to calculate a group mean position on the three dimensions. Then group heterogeneity on the three dimensions was determined by calculating the mean distance of individual average positions from the group mean. Group means were calculated for age, number of degrees, years' teaching experience, and sick leave days used. The percentage of the group that was female and the percentage of the group that was married were determined.

Statistical Analysis of Data

The Statistical Analysis System (SAS) correlation, t-test, GLM ANOVA, and multiple regression procedures were utilized. An alpha of .05 was selected as the level of significance required for rejection of a null hypothesis. When the probability was greater than .05 that the data could occur by chance, a null hypothesis was retained.

Hypothesis 1

Correlations were found between behavioral factor scores and age, number of years' teaching experience, and school enrollment. The t-test procedure was used to find differences in behavioral factor scores between female and male teachers and between married and single teachers. The ANOVA procedure was used to find differences in behavioral factor scores between teachers holding the bachelor's, master's, specialist, and doctorate; between teachers in city, suburban, and rural schools; and between teachers in English, math, science, and social studies departments. Multiple regression analysis was performed to determine the extent to which knowledge of demographic variables would prove useful in predicting behavioral factor scores.

Hypothesis 2

Correlations were found between absenteeism and age, number of years' teaching experience, and school enrollment. The t-test procedure was used to find differences in absenteeism between female and male teachers and between married and single teachers. The ANOVA procedure was used to find differences in absenteeism between teachers holding the bachelor's, master's, specialist, and doctorate; between teachers in city, suburban, and rural schools; and between teachers in English, math, science, and social studies departments. Multiple regression analysis was performed to determine the extent to which knowledge of demographic variables would prove useful in predicting teacher absenteeism.

Hypothesis 3

Correlations were found between teacher absenteeism and scores on the three behavioral factors. Teachers were grouped by years of teaching experience, then correlations were found for each group. Multiple regression analysis was performed to determine the extent to which knowledge of behavioral factor scores would prove useful in predicting teacher absenteeism.

Hypothesis 4

Correlations were found between group mean behavioral factor scores and group mean age of teachers, percent of group female, percent of group married, group mean number of degrees, group mean years teaching experience, and school enrollment. The ANOVA procedure was used to find differences in group mean behavioral scores between departments in city, suburban, and rural schools and between

English, math, science, and social studies departments. Multiple regression analysis was performed to determine the extent to which knowledge of group demographic make-up would prove useful in predicting group mean behavioral scores.

Hypothesis 5

Correlations were found between group mean absenteeism and group mean age of teachers, percent of group female, percent of group married, group mean number of degrees, group mean years' teaching experience, and school enrollment. The ANOVA procedure was used to find differences in group mean absenteeism between departments in city, suburban, and rural schools and between English, math, science, and social studies departments. Multiple regression analysis was performed to determine the extent to which knowledge of group demographic make-up would prove useful in predicting group mean absenteeism.

Hypothesis 6

Correlations were found between group mean absenteeism and group mean scores on the three behavioral factors. Multiple regression analysis was performed to determine the extent to which knowledge of group mean behavioral factor scores would prove useful in predicting group mean absenteeism.

Hypothesis 7

Correlations were found between group mean absenteeism and group heterogeneity on behavioral factor scores. Multiple regression analysis was performed to determine the extent to which knowledge of group heterogeneity on behavioral factor scores would prove useful in predicting group mean absenteeism.

CHAPTER IV

DATA PRESENTATION AND ANALYSIS

Introduction

The major purpose of this chapter is to present the results of the analysis of the data collected for this study. The sample population is also described.

Description of the Sample Population

The sample population was comprised of 330 teachers employed in 45 English, math, science, or social studies departments at 13 high schools in seven districts in Central Florida during the 1981-1982 school year. Participation in the study was voluntary. Each teacher provided information regarding personal and demographic characteristics and use of sick leave. Descriptive information regarding age, gender, marital status, highest degree obtained, and number of years of teaching experience of the 330 teachers appears in Table 4. Information regarding school location, school enrollment, and academic department of teachers appears in Table 5. School location was not a precisely defined variable in this study but study participants were able to place each school in one of the three categories provided with little hesitation. The mean and standard deviation of enrollment are provided then natural groupings representing the enrollment of each of the 13 schools are listed. The mean number of sick leave days used during the 1981-1982 school year till Easter by the 330 teachers was 3.74 with a standard deviation of 3.02. The number of days used ranged from zero to 17. Frequencies indicating how many teachers used each number of sick leave days are provided in Table 6.

Power, sociability, and intellect scores for the 330 teachers were determined utilizing data from adjective rating forms filled in by several of each teacher's colleagues. Frequency distributions of power, sociability, and intellect scores are presented in Figure 2. All three distributions appear basically symmetric though somewhat negatively skewed. The distribution of intellect scores has a high degree of peakedness with elevated tails and would be considered leptokurtic. The mean and standard deviations on power, sociability, and intellect scores for the 330 teachers are:

Power	19.68	17.45
Sociability	35.98	21.56
Intellect	16.87	12.12

Testing of the Hypotheses

Data on the 330 teachers were examined to determine if there were significant relationships between scores on Bales' behavioral factors and selected demographic

TABLE 4

PERSONAL DEMOGRAPHIC CHARACTERISTICS OF THE TOTAL SAMPLE

Characteristics	Grouping	Total Sample[a]	
		Frequency	Rel Freq
Age[b]	20-24 years	10	3.0
	25-29	45	13.6
	30-34	76	23.0
	35-39	78	23.6
	40-44	42	12.7
	45-49	26	7.9
	50-54	24	7.3
	55-59	19	5.8
	60-	10	3.0
Gender	Female	171	51.8
	Male	159	48.2
Marital Status	Married	260	78.8
	Single	70	21.2
Education	Bachelor's	155	47.0
	Master's	167	50.6
	Specialist	4	1.2
	Doctorate	4	1.2
Experience[c]	0-5 years	66	20.0
	6-10	106	32.1
	11-15	91	27.6
	16-20	39	11.8
	21-	28	8.5

[a] N=330

[b] $\bar{X}$=38.29 SD=9.60

[c] $\bar{X}$=11.27 SD=6.73

TABLE 5

SITUATIONAL DEMOGRAPHIC CHARACTERISTICS OF THE TOTAL SAMPLE

Characteristics	Grouping	Total Sample[a]	
		Frequency	Rel Freq
School Location	City	71	21.5
	Suburban	196	59.4
	Rural	63	19.1
School Enrollment[b]	516 pupils	19	5.8
	805	20	6.1
	972	16	4.8
	1292	36	10.9
	1348	27	8.2
	1500	25	7.6
	1670	34	10.3
	1686	16	4.8
	1720	20	6.1
	1930	39	11.8
	1960	35	10.6
	2395	28	8.5
	2725	15	4.5
Department	English	108	32.7
	Math	98	29.7
	Science	68	20.6
	Social Studies	56	17.0

[a] N=330

[b] $\overline{X}$=1611.59 SD=530.67

TABLE 6

SICK LEAVE DAYS USED DURING 1981-82 SCHOOL YEAR TILL EASTER

Days Used	Frequency
00	47
01	34
02	46
03	52
04	40
05	33
06	20
07	18
08	20
09	09
10	01
11	04
12	01
13	01
14	01
15	01
16	01
17	01

330 teachers

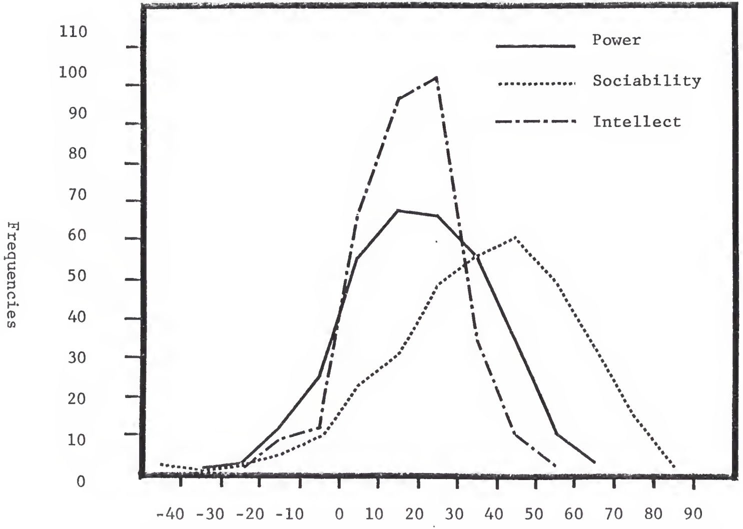

FIGURE 2

FREQUENCY POLYGONS OF POWER, SOCIABILITY, AND INTELLECT SCORES variables, teacher absenteeism and demographic variables, and scores on Bales' behavioral factors and teacher absenteeism. Data describing the 45 departmental groups were examined to determine if there were significant relationships between group mean scores on Bales' behavioral factors and group demographic make-up, group mean absenteeism and group demographic make-up, group mean scores on Bales' behavioral factors and group mean absenteeism, and group heterogeneity on Bales' behavioral factors and group mean absenteeism.

Hypotheses were written in null form for statistical analysis. An alpha of .05 was selected as the level of significance required for rejection of a null hypothesis. When the probability was higher than .05 that the data could occur by chance, a null hypothesis was retained. Hypotheses were tested using the Statistical Analysis System (SAS) correlation, t-test. general linear model F test, and multiple regression procedures.

Hypothesis 1

There are no statistically significant relationships between power, sociability, or intellect scores of teachers and selected demographic variables:

1.1 Age of the teachers

1.2 Gender of the teachers (female or male)

1.3 Marital status of the teachers (married or single)

1.4 Highest degree held by the teachers (bachelor's, master's, specialist, or doctorate)

1.5 Number of years' teaching experience of the teachers

1.6 School location (city, suburban, or rural)

1.7 School enrollment

1.8 Academic department (English, math, science, or social studies)

1.1 Age of the teachers. The correlation coefficient r for the relationship between age and each behavioral factor, the square of r or coefficient of determination, the t-test statistic, and the probability level are reported in Table 7. Although the correlation between age and power was not significant, the correlations between age and sociability and between age and intellect were. Younger teachers were higher on sociability and lower on intellect. Older teachers were lower on sociability and higher on intellect.

TABLE 7

CORRELATIONS BETWEEN AGE
AND BALES' BEHAVIORAL FACTORS

Factors	r	r^2	t	p
Power	.01	.00	0.18	.75
Sociability	-.13	.01	-2.37	.01*
Intellect	.20	.04	3.69	.00*

*$p < .05$.

1.2 Gender of the teachers. The mean scores on power, sociability, and intellect for females and males are reported in Table 8 along with standard deviations and t-test statistics. Probabilities that differences in scores between females and males could occur by chance are listed. There were no statistically significant differences between female and male teachers on power, sociability, or intellect.

1.3 Marital status of the teachers. The mean scores on power, sociability, and intellect for married and single teachers are reported in Table 9 along with standard deviations and t-test statistics. Although there were no statistically significant differences between married and single teachers on sociability or intellect, there was a significant difference between married and single teachers on power.

TABLE 8

T-TESTS OF MEAN SCORES OF FEMALES AND MALES
ON BALES' BEHAVIORAL FACTORS

	Females			Males				
Factors	N	$\bar{X}$	SD	N	$\bar{X}$	SD	t	p
Power	171	19.09	18.07	159	20.32	16.79	-0.63	.52
Sociability	171	37.64	22.84	159	34.18	19.98	1.45	.14
Intellect	171	17.83	11.76	159	15.82	12.45	1.50	.13

Degrees of Freedom=328

TABLE 9

T-TESTS OF MEAN SCORES OF MARRIED AND SINGLE TEACHERS ON BALES' BEHAVIORAL FACTORS

	Married			Single				
Factors	N	$\bar{X}$	SD	N	$\bar{X}$	SD	t	p
Power	260	20.65	17.40	70	16.07	17.28	-1.95	.05*
Sociability	260	36.13	21.17	70	35.40	23.06	-0.25	.79
Intellect	260	17.48	12.15	70	14.57	11.82	-1.79	.07

Degrees of Freedom=328

*$p<.05$.

1.4 Highest degree held by the teachers. Mean power, sociability, and intellect scores of teachers grouped by highest degree held are reported in Table 10. Standard deviations are included. Summaries of the ANOVAs for power, sociability, and intellect scores of teachers are reported in Table 11. Teachers at different educational levels differed significantly on sociability and intellect but not on power. Pairwise comparisons of the four degree groups on sociability and intellect are reported in Tables 12 and 13. Utilization of the Bonferroni t-test resulted in one significant contrast. Teachers with bachelor's degrees scored significantly lower on intellect than teachers with master's degrees.

TABLE 10

MEAN POWER, SOCIABILITY, AND INTELLECT SCORES OF TEACHERS GROUPED BY HIGHEST DEGREE HELD

	Bachelor's (N=155)		Master's (N=167)		Specialist (N=4)		Doctorate (N=4)	
Factors	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Power	18.2	17.5	21.2	17.1	24.5	17.7	5.2	23.3
Sociability	38.9	21.7	33.2	20.1	20.7	46.2	47.5	27.8
Intellect	14.7	11.4	18.4	12.4	21.2	8.9	28.7	12.5

TABLE 11

ANOVAS FOR POWER, SOCIABILITY, AND INTELLECT SCORES OF TEACHERS GROUPED BY HIGHEST DEGREE HELD

Factors	df	SS	MS	F	p	R^2
Power:						
Degree	3	1675.50	558.50	1.85	.13	.01
Error	326	98553.72	302.31			
Sociability:						
Degree	3	4053.62	1351.20	2.96	.03*	.02
Error	326	148810.26	456.47			
Intellect:						
Degree	3	1781.99	593.99	4.16	.00*	.03
Error	326	46580.13	142.88			

*$p<.05$.

TABLE 12

PAIRWISE COMPARISONS OF SOCIABILITY AMONG TEACHERS GROUPED BY HIGHEST DEGREE HELD

Degrees Compared	Mean Difference	t	p	Std Error
B VS M	5.68	2.38	.01*	2.38
B VS S	18.22	1.68	.09	10.81
B VS D	-8.52	-0.79	.43	10.81
M VS S	12.54	1.16	.24	10.80
M VS D	-14.20	-1.31	.18	10.80
S VS D	-26.75	-1.77	.07	15.10

*p<.05.

TABLE 13

PAIRWISE COMPARISONS OF INTELLECT AMONG TEACHERS GROUPED BY HIGHEST DEGREE HELD

Degrees Compared	Mean Difference	t	p	Std Error
B VS M	-3.74	-2.81	.00*	1.33
B VS S	-6.52	-1.08	.28	6.05
B VS D	-14.02	-2.32	.02*	6.05
M VS S	-2.78	-0.46	.64	6.04
M VS D	-10.28	-1.70	.09	6.04
S VS D	-7.50	-0.89	.37	8.45

*p<.05.

1.5 Number of years' teaching experience. The correlation coefficient r for the relationship between experience and each behavioral factor, the square of r or coefficient of determination, the t-test statistic, and the probability level are reported in Table 14. Although the correlation between experience and power was not significant, the correlations between experience and sociability and between experience and intellect were. Less experienced teachers were higher on sociability and lower on intellect. More experienced teachers were lower on sociability and higher on intellect.

TABLE 14

CORRELATIONS BETWEEN TEACHING EXPERIENCE
AND BALES' BEHAVIORAL FACTORS

Factors	r	r^2	t	p
Power	.04	.00	0.72	.37
Sociability	-.13	.01	-2.37	.01*
Intellect	.21	.04	3.88	.00*

*$p < .05$.

1.6 School location. Mean power, sociability, and intellect scores of teachers grouped by school location are reported in Table 15. Standard deviations are included. Summaries of ANOVAs of power, sociability, and intellect scores of teachers are reported in Table 16. Teachers at different school locations did not differ significantly on power, sociability or intellect.

TABLE 15

MEAN POWER, SOCIABILITY, AND INTELLECT SCORES OF CITY, SUBURBAN, AND RURAL TEACHERS

Factors	City (N=71)		Suburban (N=196)		Rural (N=63)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Power	18.6	16.9	19.9	17.9	20.0	16.6
Sociability	35.3	20.0	36.2	23.1	35.6	17.9
Intellect	18.1	12.9	17.0	12.1	14.9	10.8

TABLE 16

ANOVAS FOR POWER, SOCIABILITY, AND INTELLECT SCORES OF CITY, SUBURBAN, AND RURAL TEACHERS

Factors	df	SS	MS	F	p	R^2
Power:						
Location	2	97.35	48.67	.16	.85	.00
Error	327	100131.87	306.21			
Sociability:						
Location	2	50.09	25.04	.05	.94	.00
Error	327	152813.79	467.32			
Intellect:						
Location	2	360.03	180.01	1.23	.29	.00
Error	327	48002.09	146.79			

1.7 School enrollment. The correlation coefficient r for the relationship between enrollment and each behavioral factor, the square of r or coefficient of determination, the t-test statistic, and the probability level are reported in Table 17. Although the correlations between enrollment and power or enrollment and sociability were not significant, the correlation between enrollment and intellect was. Teachers scoring higher on intellect were at larger schools.

TABLE 17

CORRELATIONS BETWEEN SCHOOL ENROLLMENT
AND BALES' BEHAVIORAL FACTORS

Factors	r	r^2	t	p
Power	-.04	.00	-0.72	.36
Sociability	.06	.00	1.08	.26
Intellect	.10	.01	1.82	.04*

*$p < .05$.

1.8 Academic department. Mean power, sociability, and intellect scores of teachers grouped by academic department are reported in Table 18. Summaries of the ANOVAs of power, sociability, and intellect scores are reported in Table 19. Teachers in different academic departments differed significantly on sociability but not on power or intellect. Utilization of the Bonferroni t-test resulted in one significant contrast. Teachers in social studies departments scored significantly lower on sociability than teachers in English departments.

TABLE 18

MEAN POWER, SOCIABILITY, AND INTELLECT SCORES OF TEACHERS GROUPED BY DEPARTMENT

	English (N=108)		Math (N=98)		Science (N=68)		Soc. St. (N=56)	
Factors	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Power	20.0	20.0	19.4	17.9	20.2	15.1	18.8	13.8
Sociability	39.4	23.1	36.7	21.5	34.4	19.8	29.9	19.4
Intellect	15.8	11.3	18.4	12.1	17.8	12.0	14.7	13.3

TABLE 19

ANOVAS FOR POWER, SOCIABILITY, AND INTELLECT SCORES OF TEACHERS GROUPED BY DEPARTMENT

Factors	df	SS	MS	F	p	R^2
Power:						
Department	3	82.45	27.48	.09	.96	.00
Error	326	100146.77	307.19			
Sociability:						
Department	3	3562.45	1187.48	2.59	.05*	.02
Error	326	149301.43	457.97			
Intellect:						
Department	3	674.33	224.77	1.54	.20	.01
Error	326	47687.79	146.28			

*$p<.05$.

TABLE 20

PAIRWISE COMPARISONS OF SOCIABILITY AMONG TEACHERS GROUPED BY DEPARTMENT

Departments Compared	Mean Difference	t	p	Std Error
ENG VS MATH	2.74	0.92	.35	2.98
ENG VS SCI	5.01	1.51	.13	3.31
ENG VS SOST	9.51	2.70	.00*	3.52
MATH VS SCI	2.27	0.67	.50	3.37
MATH VS SOST	6.77	1.89	.05*	3.58
SCI VS SOST	4.49	1.16	.24	3.86

*$p < .05$.

Multiple regression analysis. The goal of this analysis was to determine the extent to which scores on each behavioral factor were related to the demographic variables. Using power, sociability, and intellect as dependent variables, multiple regression models were developed which used the five personal demographic variables then all eight personal and situational demographic variables as independent variables. The five personal demographic variables were marital status, gender, educational level, age, and teaching experience. Situational demographic variables were school location, enrollment, and academic department. Quantitative variables included age, years of teaching experience, and school enrollment. Results of the multiple regression analysis of power, sociability, and intellect are reported in Tables 21 and 22. Regression of power on the five personal demographic variables and on all eight demographic variables produced evidence in both cases that the demographic variables were not statistically significant predictors of power scores. Regressions of sociability on demographic variables indicated that 4.6 percent of the variance in sociability could be accounted for by the five personal demographic variables while 6.7 percent could be accounted for by all eight demographic variables.

TABLE 21

ANALYSIS OF VARIANCE RESULTS OF REGRESSIONS
OF BEHAVIORAL FACTORS
ON PERSONAL DEMOGRAPHIC VARIABLES

Factors	df	SS	MS	F	p	R^2
Power:	7	3062.43	437.49	1.45	.18	.030
Error	322	97166.78	301.76			
Corr Total	329	100229.22				
Sociability:	7	7072.46	1010.35	2.23	.03*	.046
Error	322	145791.42	452.76			
Corr Total	329	152863.89				
Intellect:	7	4300.36	614.33	4.49	.00*	.088
Error	322	44061.76	136.83			
Corr Total	329	48362.13				

*$p < .05$.

TABLE 22

ANALYSIS OF VARIANCE RESULTS OF REGRESSIONS
OF BEHAVIORAL FACTORS
ON PERSONAL AND SITUATIONAL DEMOGRAPHIC VARIABLES

Factors	df	SS	MS	F	p	R^2
Power:	13	3656.52	281.27	0.92	.53	.036
Error	316	96572.69	305.60			
Corr Total	329	100229.22				
Sociability:	13	10175.54	782.73	1.73	.05*	.066
Error	316	142688.34	451.54			
Corr Total	329	152863.89				
Intellect:	13	5520.23	424.63	3.13	.00*	.114
Error	316	42841.89	135.57			
Corr Total	329	48362.13				

$*p < .05$.

Regressions of intellect on demographic variables indicated that 8.8 percent of the variance in intellect could be accounted for by the five personal demographic variables while 11.4 percent could be accounted for by all eight demographic variables.

Hypothesis 2

There are no statistically significant relationships between teacher absenteeism and selected demographic variables:

2.1 Age of the teachers

2.2 Gender of the teachers (female or male)

2.3 Marital status of the teachers (married or single)

2.4 Highest degree held by the teachers (bachelor's, master's, specialist, or doctorate)

2.5 Number of years' teaching experience of the teachers

2.6 School location (city, suburban, or rural)

2.7 School enrollment

2.8 Academic department (English, math, science, or social studies)

2.1 Age of the teachers. The correlation coefficient r for the relationship between age and absenteeism, the coefficient of determination, the t-test statistic, and the probability level are reported in Table 23. Younger teachers were absent significantly more than older ones.

2.5 Number of years' teaching experience. The correlation coefficient r for the relationship between experience and absenteeism, the coefficient of determination, the t-test statistic, and the probability level are reported in Table 23. The correlation between a teacher's absenteeism and number of years of teaching experience was not statistically significant.

2.7 School enrollment. The correlation coefficient r for the relationship between enrollment and absenteeism, the coefficient of determination, the t-test statistic, and the probability level are reported in Table 23. The correlation between a teacher's absenteeism and school enrollment was not statistically significant.

TABLE 23

CORRELATIONS BETWEEN ABSENTEEISM AND AGE, EXPERIENCE, AND ENROLLMENT

Demographic Variables	r	r^2	t	p
Age	-.11	.01	-2.00	.04*
Experience	-.09	.00	-1.63	.08
Enrollment	.01	.00	0.18	.89

$^*p < .05$.

2.2 Gender of the teachers. Mean absences of teachers grouped by gender are reported in Table 24 along with standard deviations, t-test statistics, and probabilities. There were no statistically significant differences in absenteeism between female and male teachers.

2.3 Marital status of the teachers. Mean absences of teachers grouped by marital status are reported in Table 24 along with standard deviations, t-test statistics, and probabilities. There were no statistically significant differences in absenteeism between married and single teachers.

TABLE 24

T-TESTS OF MEAN ABSENTEEISM
BY GENDER AND BY MARITAL STATUS

Demographic Variables	N	$\bar{X}$	SD	t	p
Females	171	3.88	2.87	0.91	.36
Males	159	3.58	3.17		
Married	260	3.76	3.03	-0.22	.82
Single	70	3.67	3.00		

2.4 Highest degree held by the teachers. Mean absences of teachers grouped by highest degree held are reported in Table 25. Standard deviations are included. The ANOVA summary is reported in Table 26. Teachers at different educational levels differed significantly on absenteeism. Pairwise comparisons of the four degree groups on absenteeism are reported in Table 27. Utilization of the Bonferroni t-test resulted in one significant contrast. Teachers with bachelor's degrees had significantly higher incidence of absenteeism than teachers with master's degrees.

2.6 School location. Mean absences of teachers grouped by school location are reported in Table 25 along with standard deviations. The ANOVA summary appears in Table 26. There were no statistically significant differences in absenteeism among teachers working in city, suburban, and rural locations.

2.8 Academic department. Mean absences of teachers grouped by academic department are reported in Table 25 along with standard deviations. The ANOVA summary appears in Table 26. There were no statistically significant differences in absenteeism among teachers teaching English, math, science, or social studies.

TABLE 25

MEAN ABSENCES OF TEACHERS GROUPED
BY DEGREE, BY SCHOOL LOCATION, AND BY DEPARTMENT

Demographic Variables	$\bar{X}$	SD
Bachelor's	4.29	3.29
Master's	3.24	2.67
Specialist	4.75	2.21
Doctorate	2.00	2.44
City	3.94	3.49
Suburban	3.69	3.00
Rural	3.65	2.47
English	4.07	2.71
Math	3.19	2.61
Science	4.08	3.90
Social Studies	3.64	2.93

TABLE 26

ANOVAS FOR TEACHER ABSENTEEISM BY DEGREE, BY SCHOOL LOCATION, AND BY DEPARTMENT

Demographic Variables	df	SS	MS	F	p	R^2
Degree	3	105.07	35.02	3.94	.00*	.03
Error	326	2898.03	8.88			
Sch. Lo.	2	3.77	1.88	.21	.81	.00
Error	327	2999.33	9.17			
Depart.	3	50.05	16.68	1.84	.13	.01
Error	326	2953.05	9.05			

$^*p < .05$.

TABLE 27

PAIRWISE COMPARISONS OF ABSENTEEISM AMONG TEACHERS GROUPED BY HIGHEST DEGREE HELD

Degrees Compared	Estimate	t	p	Std Error
B VS M	1.05	3.16	.00*	0.33
B VS S	-0.45	-0.30	.76	1.50
B VS D	2.29	1.52	.12	1.50
M VS S	-1.50	-1.00	.31	1.50
M VS D	1.24	0.83	.40	1.50
S VS D	2.75	1.30	.19	2.10

$^*p < .05$.

Multiple regression analysis. The goal was to determine the extent to which variance in absenteeism depended on demographic variables. Using absenteeism as a dependent variable, a multiple regression model was developed which used the five personal demographic variables then all eight personal and situational demographic variables as independent variables. The five personal demographic variables were marital status, gender, educational level, age, and teaching experience. Situational demographic variables were school location, enrollment, and academic department. Quantitative variables included age, years of teaching experience, and school enrollment. Results of the multiple regression analysis of absenteeism are reported in Table 28. Regression of absenteeism on the five personal demographic variables and on all eight demographic variables produced evidence in both cases that the demographic variables were not statistically significant predictors of absenteeism.

TABLE 28

ANALYSIS OF VARIANCE RESULTS OF REGRESSIONS
OF ABSENTEEISM ON DEMOGRAPHIC VARIABLES

Demographic Variables	df	SS	MS	F	p	R^2
Absent on 5	7	119.37	17.05	1.90	.06	.039
Error	322	2883.72	8.95			
Corr Total	329	3003.10				
Absent on 8	13	181.67	13.97	1.57	.09	.060
Error	316	2821.43	8.92			
Corr Total	329	3003.10				

Hypothesis 3

There are no statistically significant relationships between power, sociability, or intellect scores of teachers and teacher absenteeism.

The correlation coefficient r for the relationship between absenteeism and each behavioral factor, the coefficient of determination, the t-test statistic, and the probability level appear in Table 29. Although the correlations between absenteeism and power or absenteeism and sociability were not significant, the correlation between absenteeism and intellect was. Teachers scoring higher on intellect were absent less.

TABLE 29

CORRELATIONS BETWEEN ABSENTEEISM AND BALES' BEHAVIORAL FACTORS

Factors	r	r^2	t	p
Power	-.01	.00	-0.00	.85
Sociability	.01	.00	0.00	.81
Intellect	-.11	.01	-2.00	.03*

*p< .05.

When teachers were grouped by years of teaching experience, there still were not significant correlations between absenteeism and power or between absenteeism and sociability. The relationship between absenteeism and intellect was significant for teachers with 11-15 years of teaching experience. The correlation coefficient r and the probability level for the correlation between absenteeism and each behavioral factor when teachers were grouped by years of teaching experience appear in Table 30.

TABLE 30

CORRELATIONS BETWEEN ABSENTEEISM AND BALES' BEHAVIORAL FACTORS WITH TEACHERS GROUPED BY YEARS OF EXPERIENCE

Factors	0-5		6-10		11-15		16-20		21-	
	r	p	r	p	r	p	r	p	r	p
Power	.00	.99	.07	.48	-.09	.41	.06	.71	-.20	.30
Sociability	.01	.95	.05	.58	.04	.74	-.11	.49	-.11	.56
Intellect	.02	.89	.02	.83	-.25	.01*	-.26	.11	-.32	.09

*p< .05.

Multiple regression analysis. The goal was to determine the extent to which variance in teacher absenteeism depended on power, sociability, and intellect scores. Using absenteeism as a dependent variable, a multiple regression model was developed which added power, sociability, and intellect to the eight demographic variables to determine if there was a significant increase in the variance in absenteeism which could be accounted for by the addition of the three behavioral factors. Prediction was not possible. Results are shown in Table 31.

TABLE 31

ANALYSIS OF VARIANCE RESULTS OF REGRESSIONS OF ABSENTEEISM ON DEMOGRAPHIC VARIABLES AND BALES' BEHAVIORAL FACTORS

Demographic Variables	df	SS	MS	F	p	R^2
Absent on D	13	181.67	13.97	1.57	.09	.060
Error	316	2821.43	8.92			
Corr Total	329	3003.10				
Absent on D & B	16	202.09	12.63	1.41	.13	.067
Error	313	2801.00	8.94			
Corr Total	329	3003.10				

Hypothesis 4

There are no statistically significant relationships between group mean scores on power, sociability, or intellect and group make-up on selected demographic variables:

4.1 Group mean age of teachers
4.2 Percent of group female
4.3 Percent of group married
4.4 Group mean number of degrees
4.5 Group mean years' teaching experience
4.6 School location (city, suburban, or rural)
4.7 School enrollment
4.8 Academic department (English, math, science, or social studies)

The correlation coefficient r for the relationships between group mean behavioral scores and quantitative demographic variables, the coefficient of determination, the t-test statistic, and the probability level for correlations are reported in Table 32. ANOVA summaries analyzing differences between group mean behavioral scores by location and department are reported in Tables 33 and 34. There were no significant relationships between mean power scores and demographic variables. Mean sociability scores were correlated positively with percent of department female. Mean intellect scores were correlated positively with mean age, percent married, mean number of degrees, and enrollment.

TABLE 32

CORRELATIONS BETWEEN GROUP MEAN BEHAVIORAL SCORES AND GROUP DEMOGRAPHIC MAKE-UP

Demographic	Power				Sociability				Intellect			
Variables	r	r^2	t	p	r	r^2	t	p	r	r^2	t	p
Mean Age	.12	.01	.79	.39	-.09	.00	-0.59	.51	.32	.10	2.12	.03*
Percent Female	.02	.00	.13	.88	.31	.09	2.13	.03*	.13	.01	0.86	.37
Percent Married	.11	.01	.72	.43	.00	.00	0.00	.97	.35	.12	2.45	.01*
Mean Degrees	.03	.00	.20	.84	-.02	.00	-0.13	.87	.35	.12	2.45	.01*
Mean Experience	.10	.01	.66	.50	-.27	.07	-1.84	.06	.27	.07	1.84	.06
Enrollment	-.13	.01	-.86	.35	.18	.03	1.20	.21	.30	.09	2.06	.04*

*$p < .05$.

TABLE 33

ANOVAS FOR GROUP MEAN BEHAVIORAL SCORES BY SCHOOL LOCATION

Factors	df	SS	MS	F	p	R^2
Power:						
Location	2	25.05	12.52	0.31	.73	.01
Error	42	1682.85	40.06			
Sociability:						
Location	2	13.92	6.96	0.05	.95	.00
Error	42	5723.27	136.26			
Intellect:						
Location	2	62.12	31.06	1.18	.31	.05
Error	42	1106.85	26.35			

TABLE 34

ANOVAS FOR GROUP MEAN BEHAVORIAL SCORES BY ACADEMIC DEPARTMENT

Factors	df	SS	MS	F	p	R^2
Power:						
Department	3	23.32	7.77	0.91	.90	.01
Error	41	1684.58	41.08			
Sociability:						
Department	3	504.36	168.12	1.32	.28	.09
Error	41	5232.83	127.63			
Intellect:						
Department	3	85.17	28.39	1.07	.37	.07
Error	41	1083.80	26.43			

Multiple regression analysis. The goal of the analysis was to determine the extent to which group mean scores on each behavioral factor were related to the group demographic make-up. Using power, sociability, and intellect as dependent variables, multiple regression models were developed which used the five personal demographic variables then all eight personal and situational demographic variables as independent variables. The five personal demographic variables were percent married, percent female, mean number of degrees, mean age, and mean years' teaching experience. Situational demographic variables were school location, enrollment, and academic department. Results of the multiple regression analysis of group mean power, sociability, and intellect scores are reported in Tables 35 and 36. Regressions of group mean power on the five personal demographic variables and on all eight demographic variables produced evidence in both cases that the demographic variables were not statistically significant predictors of group mean power scores. Regressions of group mean sociability on the five personal demographic variables and on all eight demographic variables also produced evidence in both cases that the demographic variables were not statistically significant predictors of group mean sociability scores. Regressions of group mean intellect on demographic variables indicated that 3.7 percent of the variance in intellect could be accounted for by the five personal demographic variables while 4.8 percent could be accounted for by all eight demographic variables. Since there were only 45 groups, the corrected R-square formula was utilized and resulted in 2.7 percent of the variance in group mean intellect accounted for by the five personal demographic variables and 4.0 percent accounted for by all eight demographic variables as reported in Table 37.

TABLE 35

ANALYSIS OF VARIANCE RESULTS OF REGRESSIONS OF GROUP BEHAVIORAL FACTOR MEANS ON PERSONAL DEMOGRAPHIC VARIABLES

Factors	df	SS	MS	F	p	R^2
Power	5	67.53	13.50	0.32	.89	.039
Error	39	1640.37	42.06			
Corr Total	44	1707.91				
Sociability	5	1153.02	230.60	1.96	.10	.200
Error	39	4584.17	117.54			
Corr Total	44	5737.20				
Intellect	5	427.88	85.57	4.50	.00*	.366
Error	39	741.08	19.00			
Corr Total	44	1168.97				

*$p \leq .05$.

TABLE 36

ANALYSIS OF VARIANCE RESULTS OF REGRESSIONS OF GROUP BEHAVIORAL FACTOR MEANS ON PERSONAL DEMOGRAPHIC VARIABLES

Factors	df	SS	MS	F	p	R^2
Power	11	157.91	14.35	0.31	.97	.092
Error	33	1549.99	46.96			
Corr Total	44	1707.91				
Sociability	11	1670.95	151.90	1.23	.30	.291
Error	33	4066.24	123.21			
Corr Total	44	5737.20				
Intellect	11	561.56	51.05	2.77	.01*	.480
Error	33	607.41	18.40			
Corr Total	44	1168.97				

*$p < .05$.

TABLE 37

CORRECTED R-SQUARES FOR REGRESSIONS OF GROUP BEHAVIORAL FACTOR MEANS ON DEMOGRAPHIC VARIABLES

Demographic Variables	p	R^2	Corrected R^2
Power On 5	.89	.039	.000
Power On 8	.97	.092	.000
Sociability On 5	.10	.200	.073
Sociability On 8	.30	.291	.178
Intellect On 5	.00*	.366	.265
Intellect On 8	.01*	.480	.397

*$p < .05$.

Hypothesis 5

There are no statistically significant relationships between group mean absenteeism and group make-up on selected demographic variables:

5.1 Group mean age of teachers
5.2 Percent of group female
5.3 Percent of group married
5.4 Group mean number of degrees
5.5 Group mean years' teaching experience
5.6 School location (city, suburban, or rural)
5.7 School enrollment
5.8 Academic department (English, math, science, or social studies)

The correlation r for the relationships between group mean absenteeism and quantitative demographic variables, the coefficient of determination, the t-test statistic, and the probability level for correlations are reported in Table 38. ANOVA summaries analyzing differences between group mean absenteeism by location and department are reported in Tables 39 and 40. Group mean absenteeism was negatively correlated with mean number of degrees held by departmental members and mean years of experience.

TABLE 38

CORRELATIONS OF GROUP MEAN ABSENTEEISM WITH GROUP DEMOGRAPHIC MAKE-UP

Demographic Variables	r	r^2	t	p
Mean Age	-.16	.02	-1.06	.26
Percent Female	.06	.00	0.39	.69
Percent Married	.02	.00	0.13	.86
Mean Degrees	-.35	.12	-2.45	.01*
Mean Experience	-.29	.08	-1.98	.05*
Enrollment	.03	.00	0.20	.83

*$p < .05$.

TABLE 39

ANOVA FOR GROUP MEAN ABSENTEEISM BY SCHOOL LOCATION

Demographic Variable	df	SS	MS	F	p	R^2
Location	2	0.50	0.25	0.13	.87	.01
Error	42	78.97	1.88			

TABLE 40

ANOVA FOR GROUP MEAN ABSENTEEISM BY ACADEMIC DEPARTMENT

Demographic Variable	df	SS	MS	F	p	R^2
Department	3	6.89	2.29	1.30	.28	.09
Error	41	72.58	1.77			

Multiple regression analysis. The goal of this analysis was to determine the extent to which group mean absenteeism was related to group demographic make-up. Using absenteeism as the dependent variable, multiple regression models were developed which used the five personal demographic variables then all eight personal and situational demographic variables as independent variables. The five personal demographic variables were percent married, percent female, mean number of degrees, mean age, and mean years' teaching experience. Situational demographic variables were school location, enrollment, and academic department. Results of the multiple regression analysis of group mean absenteeism are reported in Table 41. Regressions of group mean absenteeism on the five personal demographic variables and on all eight demographic variables produced evidence in both cases that the demographic variables were not statistically significant predictors of group mean absenteeism. Since there were only 45 groups, the corrected R-square formula was utilized and yielded results reported in Table 42.

TABLE 41

ANALYSIS OF VARIANCE RESULTS OF REGRESSIONS
OF GROUP MEAN ABSENTEEISM ON DEMOGRAPHIC VARIABLES

Demographic Variable	df	SS	MS	F	p	R^2
Absent On 5	5	13.87	2.77	1.65	.17	.174
Error	39	65.60	1.68			
Corr Total	44	79.47				
Absent On 8	11	26.33	2.39	1.49	.18	.331
Error	33	53.14	1.61			
Corr Total	44	79.47				

TABLE 42

CORRECTED R-SQUARES FOR REGRESSIONS
OF GROUP MEAN ABSENTEEISM
ON DEMOGRAPHIC VARIABLES

Demographic Variables	p	R^2	Corrected R^2
Absent On 5	.17	.174	.043
Absent On 8	.18	.331	.224

Hypothesis 6

There are no statistically significant relationships between group mean scores on power, sociability, or intellect and group mean absenteeism.

The r for the correlations between group mean scores on power, sociability, or intellect and group mean absenteeism, the coefficient of determination, the t-test statistic, and the probability level for correlations are reported in Table 43. There were no statistically significant relationships.

TABLE 43

CORRELATIONS OF GROUP MEAN BEHAVIORAL SCORES WITH GROUP MEAN ABSENTEEISM

Group Mean Behavioral Scores	r	r^2	t	p
Power	.09	.00	.59	.53
Sociability	.12	.01	.79	.41
Intellect	.01	.00	.07	.92

Multiple regression analysis. The goal of this analysis was to determine the extent to which variance in group mean absenteeism depended on group mean scores on behavioral factors. Using absenteeism as the dependent variable, a multiple regression model was developed which added group mean behavioral scores to demographic variables to determine if there was a significant increase in the variance in group mean absenteeism which could be accounted for by the addition of group mean behavioral scores. Prediction was not possible. Results appear in Table 44.

TABLE 44

ANALYSIS OF VARIANCE RESULTS OF REGRESSIONS OF GROUP MEAN ABSENTEEISM ON DEMOGRAPHIC VARIABLES AND GROUP MEAN BEHAVIORAL SCORES

Independent Variables	df	SS	MS	F	p	R^2
Absent on D	11	26.33	2.39	1.49	.18	.331
Error	33	53.14	1.61			
Corr Total	44	79.47				
Absent on D & B	14	28.77	2.05	1.22	.31	.362
Error	30	50.70	1.69			
Corr Total	44	79.47				

Since there were only 45 groups, the corrected R-square formula was utilized and yielded results reported in Table 45.

TABLE 45

CORRECTED R-SQUARES FOR REGRESSIONS OF GROUP MEAN ABSENTEEISM ON DEMOGRAPHIC VARIABLES AND GROUP MEAN BEHAVIORAL SCORES

Independent Variables	p	R^2	Corrected R^2
Absent On D	.18	.331	.224
Absent On D & B	.31	.362	.260

Hypothesis 7

There are no statistically significant relationships between group heterogeneity on power, sociability, or intellect scores and group mean absenteeism.

The r for the correlations between group heterogeneity on power, sociability, or intellect scores and group mean absenteeism, the coefficient of determination, the t-test statistic, and the probability level for correlations are reported in Table 46. There were no statistically significant relationships.

TABLE 46

CORRELATIONS OF GROUP BEHAVIORAL HETEROGENEITY SCORES
WITH GROUP MEAN ABSENTEEISM

Independent Variables	r	r^2	t	p
Power Heterogeneity	-.12	.01	-0.79	.40
Sociability Heterogeneity	-.01	.00	-0.07	.93
Intellect Heterogeneity	.23	.05	1.55	.11

Multiple -regression analysis. The goal of this analysis was to determine the extent to which variance in group mean absenteeism depended on group behavioral heterogeneity. Using absenteeism as the dependent variable, a multiple regression model was developed which added behavioral heterogeneity scores to demographic variables and group mean behavioral scores to determine if there was a significant increase in the variance in group mean absenteeism which could be accounted for by the addition of group heterogeneity. Prediction was not possible. Results appear in Table 47.

TABLE 47

ANALYSIS OF VARIANCE RESULTS OF REGRESSIONS
OF GROUP MEAN ABSENTEEISM
ON DEMOGRAPHIC VARIABLES, GROUP MEAN BEHAVIORAL SCORES,
AND GROUP BEHAVIORAL HETEROGENEITY SCORES

Independent Variables	df	SS	MS	F	p	R^2
Absent On D & B	14	28.77	2.05	1.22	.31	.362
Error	30	50.70	1.69			
Corr Total	44	79.47				
Absent On D, B, & BH	17	30.63	1.80	1.00	.49	.385
Error	27	48.84	1.80			
Corr Total	44	79.47				

Since there were only 45 groups, the corrected R-square formula was utilized and yielded results reported in Table 48.

TABLE 48

CORRECTED R-SQUARES FOR REGRESSIONS
OF GROUP MEAN ABSENTEEISM
ON DEMOGRAPHIC VARIABLES, GROUP MEAN BEHAVIORAL SCORES,
AND GROUP BEHAVIORAL HETEROGENEITY

Independent Variables	p	R^2	Corrected R^2
Absent On D & B	.31	.362	.260
Absent On D, B & BH	.49	.385	.287

CHAPTER V
SUMMARY AND CONCLUSIONS

Summary of the Problem, Procedures, and Findings

Problem

The focal point of the study was the determination of the extent of relationship between Bales' behavioral factors and teacher absenteeism. This study included an examination of the relationships of demographic variables to behavioral factors and to absenteeism to allow for their statistical control.

Data were examined to determine whether there were statistically significant relationships between power, sociability, or intellect scores of teachers and age of the teachers, gender of the teachers, marital status of the teachers, highest degree held by the teachers, number of years' teaching experience of the teachers, school location, school enrollment, or academic department. The question of whether there were statistically significant relationships between teacher absenteeism and these demographic variables was explored as well as the question of whether there were statistically significant relationships between power, sociability, or intellect scores of teachers and teacher absenteeism.

Determination was made of whether there were statistically significant relationships between group mean scores on power, sociability, or intellect and group mean age of teachers, percent of group female, percent of group married, group mean number of degrees, group mean years' teaching experience, school location, school enrollment, and academic department. It was determined whether there were statistically significant relationships between group mean absenteeism and these demographic variables. Then it was decided whether there were statistically significant relationships between group mean scores on power, sociability, or intellect and group mean absenteeism. Finally, data were examined to determine whether there were statistically significant relationships between group heterogeneity on power, sociability, or intellect and group mean absenteeism.

Procedures

A total of 330 teachers in 45 departmental groups at 13 high schools in seven Central Florida county districts served as voluntary participants in the study. Each teacher completed an information sheet providing demographic and absence data and filled out five adjective rating forms describing behaviors of five colleagues. Average scores for each teacher on behavioral factors were determined. Group means and group heterogeneity on the three factors were also determined. Statistical Analysis System correlation, t-test, ANOVA, and multiple regression procedures were utilized to test null hypotheses at the .05 level of significance.

Findings

The specific results for the hypotheses given in Chapter I are summarized in this section. The general hypotheses are restated followed by the specific results of the statistical analyses.

Hypothesis 1

There are no statistically significant relationships between power, sociability, or intellect scores of teachers and selected demographic variables.

1.1	power & age	no sig. correlation
1.1	sociability & age	r=-.13 t=-2.37
1.1	intellect & age	r=+.20 t=+3.69
1.2	power & gender	no sig. difference
1.2	sociability & gender	no sig. difference
1.2	intellect & gender	no sig. difference
1.3	power & marital status	t=-1.95 single<married
1.3	sociability & marital status	no sig. difference
1.3	intellect & marital status	no sig. difference
1.4	power & degree	no sig. differences
1.4	sociability & degree	F=2.96 M < B
1.4	intellect & degree	F=4.16 B < M or D
1.5	power & years' experience	no sig. correlation
1.5	sociability & years' exper.	r=-.13 t=-2.37

1.5	intellect & years' experience	r=+.21 t=+3.88
1.6	power & school location	no sig. differences
1.6	sociability & school location	no sig. differences
1.6	intellect & school location	no sig. differences
1.7	power & school enrollment	no sig. correlation
1.7	sociability & school enroll.	no sig. correlation
1.7	intellect & school enrollment	r=+.10 t=+1.82
1.8	power & academic department	no sig. differences
1.8	sociability & academic dept.	F=2.59 SS < Eng or math
1.8	intellect & academic dept.	no sig. differences
	regression of power on demographic variables	no sig. prediction
	regression of sociability on demographic variables	R^2=.066 F=1.73
	regression of intellect on demographic variables	R^2=.114 F=3.13

Hypothesis 2

There are no statistically significant relationships between teacher absenteeism and selected demographic variables.

2.1	absenteeism & age	r=-.11 t=-2.00
2.2	absenteeism & gender	no sig. difference
2.3	absenteeism & marital status	no sig. difference
2.4	absenteeism & degree	F=3.94 M < B
2.5	absenteeism & yrs.' exper.	no sig. correlation
2.6	absenteeism & school location	no sig. differences
2.7	absenteeism & school enroll.	no sig. correlation
2.8	absenteeism & academic dept.	no sig. differences

regression of absenteeism on demographic variables	no sig. prediction

Hypothesis 3

There are no statistically significant relationships between power, sociability, or intellect scores of teachers and teacher absenteeism.

absenteeism & power	no sig. correlation
absenteeism & sociability	no sig. correlation
absenteeism & intellect	r=-.11 t=-2.00
regression of absenteeism on demographic variables & behavioral factors	no sig. prediction

Hypothesis 4

There are no statistically significant relationships between group mean scores on power, sociability, or intellect and group make-up on selected demographic variables.

4.1	group mean power & group mean age	no sig. correlation
4.1	group mean sociability & group mean age	no sig. correlation
4.1	group mean intellect & group mean age	r=+.32 t=+2.12
4.2	group mean power & percent of group female	no sig. correlation
4.2	group mean sociability & percent of group female	r=+.31 t=+2.13
4.2	group mean intellect & percent of group female	no sig. correlation
4.3	group mean power & percent of group married	no sig. correlation

4.3	group mean sociability & percent of group married	no sig. correlation
4.3	group mean intellect & percent of group married	r=+.35 t=+2.45
4.4	group mean power & group mean no. of degrees	no sig. correlation
4.4	group mean sociability & group mean no. of degrees	no sig. correlation
4.4	group mean intellect & group mean no. of degrees	r=+.35 t=+2.45
4.5	group mean power & group mean experience	no sig. correlation
4.5	group mean sociability & group mean experience	no sig. correlation
4.5	group mean intellect & group mean experience	no sig. correlation
4.6	group mean power & school location	no sig. differences
4.6	group mean sociability & school location	no sig. differences
4.6	group mean intellect & school location	no sig. differences
4.7	group mean power & school enrollment	no sig. correlation
4.7	group mean sociability & school enrollment	no sig. correlation
4.7	group mean intellect & school enrollment	r=+.30 t=+2.06
4.8	group mean power & academic department	no sig. differences
4.8	group mean sociability & academic department	no sig. differences
4.8	group mean intellect & academic department	no sig. differences
	regression of group mean power on group dem. var.	no sig. prediction

	regression of group mean sociability on group dem. variables	no sig. prediction
	regression of group mean intellect on group dem. variables	$R^2=.048$ $F=2.77$ $R_c^2=.040$

Hypothesis 5

There are no statistically significant relationships between group mean absenteeism and group make-up on selected demographic variables.

5.1	group mean absenteeism & group mean age	no sig. correlation
5.2	group mean absenteeism & percent of group female	no sig. correlation
5.3	group mean absenteeism & percent of group married	no sig. correlation
5.4	group mean absenteeism & group mean no. of degrees	$r=-.35$ $t=-2.45$
5.5	group mean absenteeism & group mean experience	$r=-.29$ $t=-1.98$
5.6	group mean absenteeism & school location	no sig. differences
5.7	group mean absenteeism & school enrollment	no sig. correlation
5.8	group mean absenteeism & academic department	no sig. differences
	regression of group mean absenteeism on group demographic variables	no sig. prediction

Hypothesis 6

There are no statistically significant relationships between group mean scores on power, sociability or intellect and group mean absenteeism.

group mean absenteeism & group mean power	no sig. correlation
group mean absenteeism & group mean sociability	no sig. correlation
group mean absenteeism & group mean intellect	no sig. correlation
regression of group mean absenteeism on group demographic variables & group mean behav. scores	no sig. prediction

Hypothesis 7

There are no statistically significant relationships between group heterogeneity on power, sociability, or intellect scores and group mean absenteeism.

group mean absenteeism & group power heterogeneity	no sig. correlation
group mean absenteeism & group sociability het.	no sig. correlation
group mean absenteeism & group intellect het.	no sig. correlation
regression of group mean absenteeism on group demographic variables, group mean behav. scores, & group behavioral heterogeneity scores	no sig. prediction

Conclusions

Teacher absenteeism could not be predicted by knowledge of individual or group power, sociability, or intellect levels nor group heterogeneity on behavioral factors when controlling for eight demographic variables. There was a significant -.11 correlation between individual absenteeism and intellect score. Demographic variables related to individual absenteeism were age (r=-.11) and degree. Teachers with a master's degree were absent less than those with a bachelor's degree. Demographic variables related to group mean absenteeism were group mean number of degrees (r=-.35) and group mean years' experience (r=-.29).

Relationships of demographic variables to individual and group mean behavioral factor scores were explored. Individual power was related to marital status. Single teachers had less power than married ones. Individual sociability was related to age (r=-.13), degree, years' experience (r=-.13), and academic department. Teachers with master's degrees were lower on sociability than were those with bachelor's degrees. Teachers of social studies were lower on sociability than were teachers of English or math. The amount of variance in individual sociability scores that could be predicted by knowledge of demographic variables was 6.6 percent. Group mean sociability was related to percent of group female (r=+.31). Individual intellect was related to age (r=+.20), degree, years' experience (+.21) and school enrollment (r=+.10). Teachers with bachelor's degrees were lower on intellect than teachers with master's or doctoral degrees. The amount of variance in individual intellect scores that could be predicted by knowledge of demographic variables was 11.4 percent. Group mean intellect was related to age (r=+.32), percent of group married (r=+.35), and mean number of degrees (r=+.35). The amount of variance in group mean intellect scores that could be predicted by knowledge of demographic variables was 4 percent.

The teachers in this study scored higher on sociability than on power or intellect. Sociability scores went down with age, experience, and education. Intellect scores went up with age, experience, and education. Those hiring teachers might seem to have a choice between younger, less experienced, less educated teachers who are higher on sociability but lower on intellect and older, more experienced, better educated teachers who are lower on sociability but higher on intellect. The older, better educated, higher intellect teachers were absent less which would imply that such teachers offered an advantage to pupils. However, many pupils may prefer warm, friendly teachers. Perhaps a high school should have a balance since each pupil could gain from exposure to different personalities. Also, relationships between variables do not appear to be strong.

The fact that teachers in different departments differed on sociability might imply that teachers are attracted to different subject areas due to personality differences. The fact that larger schools had teachers with higher intellect scores might imply that such teachers are attracted to a larger school or the largeness might encourage certain behaviors.

A departmental group as a whole might increase in sociability as more females are added to the department and become more task oriented as older, married, better educated teachers are added to the department or as small schools are consolidated into larger ones.

Teacher absenteeism cannot be assumed to be closely related to group health factors or teacher satisfaction factors which may be manipulated in order to cut expenses and promote continuity of instruction. Sick leave use by teachers has been considered an expense to be cut but it is the opinion of this writer that sick leave days should be renamed R&R days and recognized as being part of teacher compensation. Teachers should have 10 paid R&R days per year with compensation at the end of each year for any days not used. Teaching is emotionally exhausting and use of R&R days should not be discouraged. To maintain continuity of quality instruction, a permanent corps of reserve teachers should be employed and trained by a school district as suggested by Castetter (1976, p. 448).

How do the results obtained in this study relate to previous research? That question is explored below.

Although very low negative correlations between job satisfaction and absenteeism have usually been found, knowledge of individual behavioral factor scores did not aid in prediction of absenteeism nor did knowledge of group mean behavioral scores or group heterogeneity on behavioral scores aid in prediction of group mean absenteeism. If individuals with higher scores were in more satisfying positions in the group structure, the greater satisfaction did not result in less absenteeism. Thus, the contention of Bridges (1980, p. 42) that job satisfaction is not a major factor in absenteeism would be supported.

While Bales found female members of his academic self-analytic groups to be further downward, considerably more positive, and slightly backward from men, there were no significant differences between female and male high school teachers participating in this study on power, sociability, or intellect. Although the departmental groups may be considered natural groups, the males would probably not be representative of a wide range of males, since males who are the most upward, negative, and forward may seek and secure the better-paying, higher-prestige administrative jobs in education.

Results found in this study regarding the relationships between demographic variables and absenteeism appear basically consistent with previous research results. The -.11 correlation between individual absenteeism and age supports results found by Weaver (1970), Hedges (1973), Sharples (1973), Nicholson and Goodge (1976), Bernardin (1977), and Johns (1978) regarding workers in general. However, the studies yielding other results and those dealing with teachers specifically which did not find a negative relationship cannot be ignored when such a small negative correlation is found and when no correlation was found between group mean absenteeism and group mean age. The failure to find a significant difference in absenteeism between female and male teachers and between married and single teachers and to find significant correlations between group mean absenteeism and either percent of department female or percent of department married supports the conclusion based on previous research that gender and marital status are not good predictors of absenteeism. The finding that teachers with the master's degree were absent less than those with a bachelor's degree and that group mean absenteeism and group mean number of degrees had a -.35 correlation are consistent with results found by Raouf (1973) and Taylor (1979) regarding workers in general and results found by Lee (1960) and Douglas (1976) regarding teachers but is inconsistent with results of researchers finding a positive or no relationship between educational level and absenteeism. Although no significant correlation was found between individual absenteeism and years of experience, a correlation of -.29 was found between group mean absenteeism and group mean experience which would lend support to results found by Waters and Roach (1971), Raouf (1973), Nicholson and Goodge (1976), Bernardin (1976), and Johns (1978) regarding workers in general and Gibson and Lafornara (1972) regarding educational personnel. The failure to find relationships between individual and group mean absenteeism and school location, enrollment, or department would not be consistent with findings of Douglas (1976) and Shaw (1980) that teachers in city schools had more absences nor the findings of many researchers of a positive relationship between work unit size and worker absenteeism but would support reports by Bundren (1974) and Marchant (1976) of no correlation between school size and absenteeism.

Recommendations for Further Study

Groups with equalized power could be compared to groups with great power differentials to determine how the groups differ on other variables. Manipulation of such variables for the purpose of promoting power equalization could result in establishment of causal relationships.

The teachers in this study were higher on sociability than they were on the other two factors. It should be determined whether teachers in general are similar or whether highly sociable Southerners with their "Jimmy Carter" grins would not represent teachers in other areas of the country. It should be determined whether teachers score as low on power and intellect in other states where teachers are paid better and where the equal rights amendment was passed. If teachers who are successful and content have certain characteristics in common, this information would prove useful to those advising prospective teachers of their chances for success and contentment. Whether individuals with different jobs also become lower on sociability and higher on intellect over the years could also be the subject of research.

Laboratory studies probably hold the most potential for determination of specific methods of manipulating behavior for improvement of group health. Bales' theory assumes that a healthy group is better than an unhealthy one and research based on Bales' theory shares that assumption.

APPENDIX A:

FORMS USED FOR DATA COLLECTION

Dear Principal:

As a Ph.D Candidate at the University of Florida, I am in the process of collecting data for use in my dissertation which concerns the relationship between group structure and teacher absenteeism and is based on the theory of Robert Bales of Harvard University.

I would appreciate your help so very much. I am asking you to:

1. List teacher names on the code sheet
2. Xerox copies of the code sheet for the teachers listed.
3. Send the enclosed postcard to me telling how many teacher packets I should send for each department. (ten, nine, eight, or whatever)
4. When you receive the teacher packets from me, distribute them to teachers (perhaps put in their boxes) and provide each teacher with one of the xeroxed copies of the code sheet.

Each teacher packet has instructions, a $2 check, a stamped and addressed envelope, and the information sheet and five adjective forms to be mailed to me. Only about 15 minutes are needed to fill out these forms.

Your help is very much appreciated.

Sincerely,

Joyce A. Stock
1011 E. University
Deland, Fla. 32720
(904) 736-1893

CODE SHEET

for U-F Study

Dear Teacher:

I have completed this code sheet for your use so your privacy will be protected. Only these code numbers will appear on forms given to the researcher.

principal_______________

ENGLISH DEPARTMENT

E1____________________
E2____________________
E3____________________
E4____________________
E5____________________
E6____________________
E7____________________
E8____________________
E9____________________
E10___________________

MATH DEPARTMENT

M1____________________
M2____________________
M3____________________
M4____________________
M5____________________
M6____________________
M7____________________
M8____________________
M9____________________
M10___________________

SCIENCE DEPARTMENT

S1____________________
S2____________________
S3____________________
S4____________________
E5____________________
E6____________________
E7____________________
E8____________________
E9____________________
E10___________________

SOCIAL STUDIES DEPPARTMENT

H1____________________
H2____________________
H3____________________
H4____________________
H5____________________
H6____________________
H7____________________
H8____________________
H9____________________
H10___________________

code number ________

Dear Teacher:

As a Ph.D Candidate at the University of Florida, I am in the process of collecting data for use in my dissertation which concerns the relationship between group structure and absenteeism and is based on the theory of Robert Bales of Harvard University.

I am asking teachers to provide some information about themselves and to fill in adjective forms on five members of their department. This should take about 15 minutes. Your principal has prepared a code sheet so that no names but only numbers will appear on all materials I receive so the privacy of all teachers will be protected.

When you have completed the information sheet and forms, please mail them to me in the enclosed, stamped, addressed envelope. Please keep the code sheet. Also, please fill in your name on the enclosed $2 check and consider this a nominal token of my appreciation for your help with my research project. You deserve much more that I can afford to pay for your efforts in the advancement of knowledge.

Sincerely,

Joyce A. Stock
1011 E. University Ave.
DeLand, Fla. 32720
(904) 736-1893

---

check for $2 attached

INFORMATION SHEET

school name ______________________________

location (city, suburban, or rural) ______________

enrollment ____________

individual code number ________

academic department:

Eng___ math___ science___ social studies ___

age _____

gender (F or M) ______

married (yes or no) ________

highest academic degree ____________

total years' teaching experience _______

Please record in the space below the number of sick leave days you have used this school year up till Easter. Please don't include days that were part of long-term absences of more than ten consecutive days for surgery, maternity, and such.

sick leave days used _________

school____________________

dept: Eng__math__sci__ss__

individual described__________
(use number from code sheet)

BALES' SYMLOG ADJECTIVE RATING FORM

Directions: Circle the best choice for each item. If any one of the adjectives applies but not the others, take this one as the meaning and disregard the others.

for use of researcher:

		(0)	(1)	(2)	(3)	(4)	X	U	D	P	N	F	B
U	active, dominant, talks a lot	never	rarely	sometimes	often	always	6	☐					
UP	extroverted, outgoing, positive	never	rarely	sometimes	often	always	3	☐		☐			
UPF	a purposeful democratic task leader	never	rarely	sometimes	often	always	2	☐		☐		☐	
UF	an assertive business-like manager	never	rarely	sometimes	often	always	3	☐				☐	
UNF	authoritarian, controlling, disapproving	never	rarely	sometimes	often	always	2	☐			☐	☐	
UN	domineering, tough-minded, powerful	never	rarely	sometimes	often	always	3	☐			☐		
UNB	provocative, egocentric, shows off	never	rarely	sometimes	often	always	2	☐			☐		☐
UB	jokes around, expressive, dramatic	never	rarely	sometimes	often	always	3	☐					☐
UPB	entertaining, sociable, smiling, warm	never	rarely	sometimes	often	always	2	☐		☐			☐
P	friendly, equalitarian	never	rarely	sometimes	often	always	6			☐			
PF	works cooperatively with others	never	rarely	sometimes	often	always	3			☐		☐	
F	analytical, task-oriented, problem-solving	never	rarely	sometimes	often	always	6					☐	
NF	legalistic, has to be right	never	rarely	sometimes	often	always	3				☐	☐	
N	unfriendly, negativistic	never	rarely	sometimes	often	always	6				☐		
NB	irritable, cynical, won't cooperate	never	rarely	sometimes	often	always	3				☐		☐
B	shows feelings and emotions	never	rarely	sometimes	often	always	6						☐
PB	affectionate, likeable, fun to be with	never	rarely	sometimes	often	always	3			☐			☐
DP	looks up to others, appreciative, trustful	never	rarely	sometimes	often	always	3		☐	☐			
DPF	gentle, willing to accept responsibility	never	rarely	sometimes	often	always	2		☐	☐		☐	
DF	obedient, works submissively	never	rarely	sometimes	often	always	3		☐			☐	
DNF	self-punishing, works too hard	never	rarely	sometimes	often	always	2		☐		☐	☐	
DN	depressed, sad, resentful, rejecting	never	rarely	sometimes	often	always	3		☐		☐		
DNB	alienated, quits, withdraws	never	rarely	sometimes	often	always	2		☐		☐		☐
DB	afraid to try, doubts own ability	never	rarely	sometimes	often	always	3		☐				☐
DPB	quietly happy just to be with others	never	rarely	sometimes	often	always	2		☐	☐			☐
D	passive, introverted, says little	never	rarely	sometimes	often	always	6		☐				

U	D	P	N	F	B	
						totals

APPENDIX B:

FORMS ILLUSTRATING COMPILATION OF DATA

school__________________
dept: [✓ Eng]_math__sci__ss__
individual described E10
(use number from code sheet)

BALES' SYMLOG ADJECTIVE RATING FORM

Directions: Circle the best choice for each item. If any one of the adjectives applies but not the others, take this one as the meaning and disregard the others.

for use of researcher:

		(0)	(1)	(2)	(3)	(4)	x	U	D	P	N	F	B
U	active, dominant, talks a lot	never	rarely	sometimes	[✓ often]	always	6	18					
UP	extroverted, outgoing, positive	never	rarely	sometimes	[✓ often]	always	3	9		9			
UPF	a purposeful democratic task leader	never	[✓ rarely]	sometimes	often	always	2	2		2		2	
UF	an assertive business-like manager	never	[✓ rarely]	sometimes	often	always	3	3				3	
UNF	authoritarian, controlling, disapproving	never	[✓ rarely]	sometimes	often	always	2	2			2	2	
UN	domineering, tough-minded, powerful	never	[✓ rarely]	sometimes	often	always	3	3			3		
UNB	provocative, egocentric, shows off	never	[✓ rarely]	sometimes	often	always	2	2			2		2
UB	jokes around, expressive, dramatic	never	rarely	sometimes	[✓ often]	always	3	9					9
UPB	entertaining, sociable, smiling, warm	never	rarely	sometimes	[✓ often]	always	2	6		6			6
P	friendly, equalitarian	never	rarely	sometimes	[✓ often]	always	6			18			
PF	works cooperatively with others	never	rarely	sometimes	[✓ often]	always	3			9		9	
F	analytical, task-oriented, problem-solving	never	[✓ rarely]	sometimes	often	always	6					6	
NF	legalistic, has to be right	never	[✓ rarely]	sometimes	often	always	3				3	3	
N	unfriendly, negativistic	[✓ never]	rarely	sometimes	often	always	6				0		
NB	irritable, cynical, won't cooperate	[✓ never]	rarely	sometimes	often	always	3				0		0
B	shows feelings and emotions	never	rarely	sometimes	[✓ often]	always	6						18
PB	affectionate, likeable, fun to be with	never	rarely	sometimes	[✓ often]	always	3			9			9
DP	looks up to others, appreciative, trustful	never	rarely	sometimes	[✓ often]	always	3		9	9			
DPF	gentle, willing to accept responsibility	never	rarely	[✓ sometimes]	often	always	2		4	4		4	
DF	obedient, works submissively	never	rarely	[✓ sometimes]	often	always	3		6			6	
DNF	self-punishing, works too hard	[✓ never]	rarely	sometimes	often	always	2		0		0	0	
DN	depressed, sad, resentful, rejecting	[✓ never]	rarely	sometimes	often	always	3		0		0		
DNB	alienated, quits, withdraws	[✓ never]	rarely	sometimes	often	always	2		0		0		0
DB	afraid to try, doubts own ability	never	rarely	[✓ sometimes]	often	always	3		6				6
DPB	quietly happy just to be with others	never	rarely	[✓ sometimes]	often	always	2		4	4			4
D	passive, introverted, says little	[✓ never]	rarely	sometimes	often	always	6		0				
								U	D	P	N	F	B
							totals	54	29	70	10	35	54

+25 +60 -19

school [redacted]
type sub enrollment 1500

department: [✓ Eng] math sci ss

raters

subjects	gender	age	marital status	highest degree	total years teaching	sick leave days used	1			2			3			4			5		
							P	A	C	P	A	C	P	A	C	P	A	C	P	A	C
1	F	44	+	AA	20	9				18	78	32	9	38	35	18	104	30			
2	F	32	+	BA	4	4							24	11	5	24	104	24			
3	F	41	+	ME	12	5										7	-8	-1			
4	F	35	-	BS	5	5															
5	F	35	-	BS	5	6															
6	F	45	+	BA	14	6	-45	30	29												
7	F	50	+	BA	25	3	-8	22	42	11	-34	17									
8	F	52	+	BE	20	3	24	36	42	44	70	4	35	78	15						
9	F	57	+	BA	26	1	35	35	38	49	21	20	27	65	16	12	104	24			
10	F	46	+	BA	19	0	13	65	38	-9	35	28	19	74	23	30	104	30			
11																					
12																					
		43.7		1.1	15.0	4.2															
	1.00		.80																		

subjects	6			7			8			9			10			11			12			average		
	P	A	C	P	A	C	P	A	C	P	A	C	P	A	C	P	A	C	P	A	C	P	A	C
1	-1	30	17																			11	63	29
2	-1	67	20	-12	58	24																9	60	18
3	46	-10	-6	12	42	18	43	-9	-8													27	4	1
4	51	58	9	29	51	26	55	74	17	43	83	24										45	67	19
5	-26	10	6	10	32	24	4	-5	-11	-6	-33	-11	-43	-41	-6							-12	-7	0
6				-2	63	23	-43	-41	4	-43	-46	5	-43	-9	0							-35	-1	12
7							17	-68	9	19	-86	1	21	-59	22							12	-45	18
8										47	87	20	12	94	36							32	73	23
9													26	93	29							30	64	25
10																						13	70	30
11																								
12																								

group mean	13	35	18
mean distance from mean:	7.7	37.6	16.2

group BCE 01

REFERENCES

Abelson, R., Aronson, E., McGuire, W., Newcomb, T., Rosenberg, M., & Tannenbaum, P. (Eds.). *Theories of cognitive consistency: A sourcebook*. Chicago: Rand McNally, 1968.

Allport, G. *Personality: A psychological interpretation*. New York: Holt, 1937.

Argyris, C. *Integrating the individual and the organization*. New York: Wiley, 1964.

Backenheimer, M. *Some sociological correlates of sick absence behavior*. Unpublished Ph.D. dissertation, The American University, 1967.

Bales, R. *Interaction process analysis: A method for the study of small groups*. Cambridge, Mass.: Addison-Wesley, 1950.

Bales, R. *Personality and interpersonal behavior*. New York: Holt, 1970.

Bales, R. *SYMLOG case study kit*. New York: Free Press, 1980.

Bales, R., & Cohen, S. *SYMLOG: A system for the multiple level observation of groups*. New York: Free Press, 1979.

Bernardin, H. The influence of reinforcement orientation on the relationship between supervisory style and effectiveness criteria (Ph.D. dissertation, Bowling Green State University, 1976). *Dissertation Abstracts International*, 1976, *37*, 1018B. (University Microfilms No. 76-17, 075)

Bernardin, H. The relationship of personality variables to organizational withdrawal. *Personnel Psychology*, 1977, *30*, 17-27.

Blau, P. *Exchange and power in social life*. New York: Wiley, 1964.

Blau, P. Social exchange. In D. Sills (Ed.), *International encyclopedia of the social sciences* (Vol. 7). New York: Free Press, 1968.

Blumer, H. *Symbolic interactionism: Perspective and method.* Englewood Cliffs, N. J.: Prentice-Hall, 1969.

Bowen, M. Family therapy and family group therapy. In H. Kaplan & B. Sadock (Eds.), *Comprehensive group psychiatry*. Baltimore: Williams & Wilkins, 1971.

Brayfield, A., & Crockett, W. Employee attitudes and employee performance. *Psychological Bulletin*, 1955, *52*, 396-424.

Bridges, E. Job satisfaction and teacher absenteeism. *Educational Administration Quarterly*, 1980, *16*(2), 41-56.

Bridges, E., & Hallinan, M. Subunit size, work system interdependence, and employee absenteeism. *Educational Administration Quarterly*, 1978, *14*(2), 24-42.

Bruner, J. Social psychology and perception. In E. Macoby, T. Newcomb, & E. Hartley (Eds.), *Readings in social psychology* (3rd ed.). New York: Holt, 1958.

Bundren, D. The influence of situational and demographic factors on the absentee patterns of teachers (Ed.D. dissertation, University of Southern California, 1974). *Dissertation Abstracts International*, 1974, *35*, 1895A. (University Microfilms No. 74-21, 458)

Burwen, L., & Campbell, D. The generality of attitudes toward authority and nonauthority figures. *Journal of Abnormal and Social Psychology*, 1957, *54*, 24-31.

Buss, A., & Plomin, R. *A temperament theory of personality development*. New York: Wiley, 1975.

Campbell, E. Sick leave abuse and what to do about it: A look at government employees. *Personnel*, 1970, *47*, 42-48.

Cartwright, D., & Zander, A. (Eds.). *Group dynamics: Research and theory* (3rd ed.). New York: Harper, 1968.

Castetter, W. *The personnel function in educational administration* (2nd ed.). New York: Macmillan, 1976.

Chadwick-Jones, J., Brown, C., Nicholson, N., & Sheppard, C. Absence measures: Their reliability and stability in an industrial setting. *Personnel Psychology*, 1971, *24*, 463-470.

Chicago Board of Education. *Study of employee absenteeism in Chicago public schools*. Chicago: Author, 1960.

Coller, R. An analysis of teacher absenteeism and its relationship to teacher morale and demographic characteristics of teachers (Ph.D. dissertation, University of Michigan, 1975). Dissertation Abstracts International, 1976, 36, 6388A. (University Microfilms No. 76-09, 372)

Cooper, R., & Payne, R. Age and absence: A longitudinal study in three firms. Occupational Psychology, 1965, 39, 31-35.

Dade County, Florida Public Schools Office of Management and Budget. Absenteeism: A study of leave taken by Dade County Public School employees. Miami: Author, 1978.

Dahrendorf, R. Class and class conflict in industrial society. Stanford, Calif.: Stanford University Press, 1959.

D'Andrade, R. Trait psychology and componential analysis. American Anthropologist, 1965, 67, 215-228.

Douglas, S. Social-psychological correlates of teacher absenteeism- A multi-variate study (Ph.D. dissertation, Ohio State University, 1976). Dissertation Abstracts International, 1977, 37, 7033A-7034A. (University Microfilms No. 77-10, 517)

Festinger, L. A theory of cognitive dissonance. Stanford, Calif.: Stanford University Press, 1957.

Flanagan, R., Strauss, G., & Ulman, L. Worker discontent and the work place behavior. Industrial Relations, 1974, 13, 101-123.

Freedman, D. Human infancy: An evolutionary perspective. Hillsdale, N. J.: Erlbaum, 1974.

Freud, A. The ego and the mechanisms of defense. New York: International Universities Press, 1946.

Freud, S. [New introductory lectures in psychoanalysis] (J. Strachey, Ed. and trans.). New York: Norton, 1965. (Originally published, 1933.)

Garrison, K., & Muchinsky, P. Attitudinal and biographical predictors of incidental absenteeism. Journal of Vocational Behavior, 1977, 10, 221-230.

Gaudet, F. Solving the problems of employee absence. New York: American Management Association, 1963.

Gibson, R. Toward a conceptualization of absence behavior of personnel in organizations. Administrative Science Quarterly, 1966, 11, 107-133.

Gibson, R., & Lafornara, P. Collective legitimacy and organizational attachment: A longitudinal case study of school personnel absences. Paper presented at the annual meeting of the American Educational Research Association, Chicago, April 1972. (ERIC Document Reproduction Service No. ED 063 674)

Glaser, B., & Strauss, A. The discovery of grounded theory: Strategies for qualitative research. Chicago: Aldine, 1967.

Goble, J. Relationships between job satisfaction, demographic factors, absenteeism, and tenure of workers in a Delmarva broiler processing plant (Ph.D. dissertation, University of Maryland, 1976). Dissertation Abstracts International, 1977, 38, 1820A. (University Microfilms No. 77-22, 504)

Goffman, E. The presentation of self in everyday life. Garden City, N. Y.: Doubleday, 1959.

Hare, A. Handbook of small group research (2nd ed.). New York: Free Press, 1976.

Hare, A., Borgatta, E., & Bales, R. (Eds.). Small groups: Studies in social interaction. New York: Knopf, 1965.

Hartshorne, H., & May, M. Studies in the nature of character. Vol. I. Studies in deceit. New York: Macmillan, 1928.

Hedges, J. Absence from work- A look at some national data. Monthly Labor Review, 1973, 96(7), 24-30.

Hedges, J. Unscheduled absence from work- An update. Monthly Labor Review, 1975, 98(8), 36-39.

Hedges, J. Absence from work- Measuring the hours lost. Monthly Labor Review, 1977, 100(10), 16-23.

Heider, F. The psychology of interpersonal relations. New York: Wiley, 1958.

Hersey, P., & Blanchard, D. Management of organizational behavior: Utilizing human resources. Englewood Cliffs, N. J.: Prentice-Hall, 1972.

Herzberg, F. Work and the nature of man. Cleveland: World Pub. Co., 1966.

Herzberg, F., Mausner, B., Peterson, R., & Capwell, D. Job attitudes: Review of research and opinion. Pittsburgh: Psychological Service of Pittsburgh, 1957.

Hill, M. Who stays home? New Society, 1967, 9, 459-460.

Homans, G. Social behavior: Its elementary forms. New York: Harcourt, Brace, & World, 1961.

Huse, E., & Taylor, E. Reliability of absence measures. Journal of Applied Psychology, 1962, 46, 159-160.

Indik, B. Organization size and member participation. Human Relations, 1965, 18, 339-350.

Indik, B., & Seashore, S. Effects of organization size on member attitudes and behavior (Research Monograph No. 12). Ann Arbor: Survey Research Center of the Institute for Social Research, University of Michigan, 1961.

Ingham, G. Size of industrial organization and worker behavior. Cambridge, England: Cambridge University Press, 1970.

Isambert-Jamati, V. Absenteeism among women workers in industry. International Labour Review, 1962, 85, 248-261.

Johns, G. Attitudinal and nonattitudinal predictors of two forms of absence from work. Organizational Behavior and Human Performance, 1978, 22, 431-444.

Jones, E. (Ed.). Florida statistical abstract 1972. Gainesville, Florida: University of Florida Press, 1972.

Kelley, H. Attribution in social interaction. Morristown, N. J.: General Learning Press, 1971.

Kornhauser, A. Mental health of the industrial worker: A Detroit study. Detroit: Department of Psychology, Wayne State University, 1962.

Kovach, K. Organization size as related to job satisfaction, absenteeism, and turnover (D.B.A. dissertation, University of Maryland, 1976). Dissertation Abstracts International, 1976, 37, 3752A-3753A. (University Microfilms No. 76-27, 403)

Lee, B. Teacher absences and cost of substitute services (Research Memorandum No. 1960-35). Washington, D. C.: National Educational Association Research Division, 1960.

Lewin, K. Field theory in social science. New York: Harper, 1951.

Likert, R. The human organization: Its management and value. New York: McGraw-Hill, 1967.

Lortie, D. School-teacher: A sociological study. Chicago: University of Chicago Press, 1975.

Mandler, G. Organization and memory. In K. Spence & J. Spence (Eds.), The psychology of learning and motivation: Advances in research and theory. New York: Academic Press, 1968.

Manganiello, L. A study to determine the relationship of teacher self-acceptance and other selected variables to teacher absence behavior (Ed.D. dissertation, University of Miami, 1972). Dissertation Abstracts International, 1973, 34, 95A-96A. (University Microfilms No. 73-16, 842)

Mann, F., & Baumgartel, H. Absences and employee attitudes in an electric power company. Ann Arbor: Institute for Social Research, University of Michigan, 1953.

Marchant, R. The effects of selected variables on teacher absenteeism (Ed.D. dissertation, University of Virginia, 1976). Dissertation Abstracts International, 1977, 37, 6187A. (University Microfilms No. 77-07, 561)

Marlin, H. An analysis of absenteeism and utilization of sick leave by selected full-time ten-month professional personnel in a semi-rural school system (Ed.D. dissertation, University of Southern Mississippi, 1976). Dissertation Abstracts International, 1977, 37, 5497A-5498A. (University Microfilms No. 77-05, 960)

Martin, J. Some aspects of absence in a light engineering factory. Occupational Psychology, 1971, 45, 77-89.

Mayr, E. Behavior and systematics. In A. Roe & G. Simpson (Eds.), Behavior and evolution. New York: Holt, 1958.

McGregor, D. The human side of enterprise. New York: McGraw-Hill, 1960.

Mead, G. Mind, self, & society. Chicago: University of Chicago Press, 1934.

Merton, R., & Kitt, A. Contributions to the theory of reference group behavior. In R. Merton & P. Lazarsfeld (Eds.), Continuities in social research; studies in the scope and method of "The American soldier." Glencoe, Ill.: Free Press, 1950.

Metzner, H., & Mann, F. Employee attitudes and absences. Personnel Psychology, 1953, 6, 467-485.

Minuchin, S. Families and family therapy. Cambridge, Mass.: Harvard University Press, 1974.

Mischel, W. Personality and assessment. New York: Wiley, 1968.

Muchinsky, P. Employee absenteeism: A review of the literature. Journal of Vocational Behavior, 1977, 10, 316-340.

Mulaik, S. Are personality factors raters' conceptual factors? Journal of Consulting Psychology, 1964, 28, 506-511.

Newcomb, T. An approach to the study of communicative acts. Psychological Review, 1953, 60, 393-404.

Nicholson, N., & Goodge, P. The influence of social, organizational and biographical factors on female absence. Journal of Management Studies, 1976, 13, 234-254.

Olson, M. Identifying quality in school classrooms: Some problems and some answers. Central Ideas, 1971, 21, 1-11.

Osgood, C., & Tannenbaum, P. The principle of congruity in the prediction of attitude change. Psychological Review, 1955, 62, 42-55.

Overall, J. Note on the scientific status of factors. Psychological Bulletin, 1964, 61, 270-276.

Parsons, T. The social system. Glencoe, Ill.: Free Press, 1951.

Passini, F., & Norman, W. A universal conception of personality structure? Journal of Personality and Social Psychology, 1966, 4, 44-49.

Pennsylvania School Board Association, Inc. Professional staff absence study. Philadelphia: Author, 1978.

Pettigrew, T. Social evaluation theory: Convergences and applications. In D. Levine (Ed.), Nebraska Symposium on Motivation (Vol. 15). Lincoln: University of Nebraska Press, 1967.

Philadelphia Suburban School Study Council. Teacher absenteeism and related policies for supplemental remuneration. Philadelphia: Author, 1970.

Porter, L., & Steers, R. Organizational, work, and personal factors in employee turnover and absenteeism. Psychological Bulletin, 1973, 80, 151-176.

Price, J. Handbook of organizational measurement. Lexington, Mass.: Heath, 1972.

Raouf, B. Profile of an absentee. Industry Week, 1973, 178, 41.

Redmond, M. The relationships of selected factors to illness absences in the Fort Madison Community School District- A case study (Ph.D. dissertation, The University of Iowa, 1978). Dissertation Abstracts International, 1978, 39, 3291A-3292A. (University Microfilms No. 78-22, 443)

Rempel, A., & Bentley, R. Manual for the Purdue Teacher Opinionnaire. West LaFayette, Indiana: University Bookstore, 1967.

Ronan, W., & Prien, E. Perspectives on the measurement of human performance. New York: Appleton-Century-Crofts, 1971.

Sears, R. Dependency motivation. In M. Jones (Ed.), Nebraska Symposium on Motivation (Vol. 11). Lincoln: University of Nebraska Press, 1963.

Sellett, L. Age and absenteeism. Personnel Journal, 1964, 43, 309-313.

Shaw, J. Leadership behavior, teacher morale, and unexpected teacher absenteeism in selected elementary schools in an urban school district (Ed. D. dissertation, University of Florida, 1980). Dissertation Abstracts International, 1981, 42, 495A. (University Microfilms No. 81-15, 676)

Shaw, M. Group dynamics: The psychology of small group behavior. New York: McGraw-Hill, 1971.

Sharples, D. A study of the predictive relationship between absenteeism of classified civil service personnel and job satisfaction (Ph.D. dissertation, Ohio University, 1973). Dissertation Abstracts International, 1973, 34, 2240A. (University Microfilms No. 73-25, 755)

Sheldon, W., & Stevens, S. The varieties of temperament. New York: Harper, 1942.

Slick, G. The relationship of organizational climate factors which influence morale and other selected variables to absence frequency (Ed.D. dissertation, Temple University, 1974). Dissertation Abstracts International, 1975, 35, 4947A. (University Microfilms No. 74-28, 194)

Smith, P., Kendall, L., & Hulin, C. The measurement of satisfaction in work and retirement. Chicago: Rand McNally, 1969.

State of New York, Office of Education Performance Review. Teacher absenteeism in New York City and the cost effectiveness of substitute teachers. Albany, N. Y.: Author, 1974.

Stecker, A. A two factor behavioral theory of industrial absenteeism. Unpublished doctoral dissertation, Indiana University, 1972.

Stern, K. Principles of human genetics (2nd ed.). San Francisco: Freeman, 1960.

Strodtbeck, F., & Mann, R. Sex role differentiation in jury deliberations. Sociometry, 1956, 19, 18-21.

Taylor, D. Absent workers and lost work hours, May 1978. Monthly Labor Review, 1979, 102(8), 49-53.

Thibaut, J., & Kelley, H. The social psychology of groups. New York: Wiley, 1959.

Thompson, R. (Ed.). 1981 Florida statistical abstract. Gainesville, Florida: University Presses of Florida, 1981.

United States Government Printing Office. United States Department of Labor Statistics, Division of Economic Studies. Washington, D. C.: Author, 1978.

Vroom, V. Work and motivation. New York: Wiley, 1964.

Waters, L., & Roach, D. Relationship between job attitudes and two forms of withdrawal from the work situation. Journal of Applied Psychology, 1971, 55, 92-94.

Waters, L., & Roach, D. Job attitudes as predictors of termination and absenteeism: Consistency over time and across organizational units. Journal of Applied Psychology, 1973, 57, 341-342.

Weaver, C. Influence of sex, salary and age on seasonal use of sick leave. Personnel Journal, 1970, 49, 675-679.

Weaver, C., & Holmes, S. On the use of sick leave by female employees. Personnel Administration and Public Personnel Review, 1972, 1, 46-50.

World almanac & book of facts, 1982. New York: Newspaper Enterprise Association, Inc., 1982.

BIOGRAPHICAL SKETCH

Joyce Ann Gardner Stock was born in Ann Arbor, Michigan, on August 2, 1944, and attended Lincoln Consolidated School in Ypsilanti until graduation in 1962. Michigan State University was attended until 1964. After marriage and the birth of a daughter in 1965, she completed a Bachelor of Arts degree in elementary education at the University of North Carolina in 1967. A Master of Education degree in exceptional child education was completed in 1975 at Stetson University in DeLand, Florida. Eleven years of teaching experience at grade levels from second through sixth were obtained in Jackson, Mississippi, Houston, Texas, and Volusia County, Florida. Following the birth of a son in 1978, a Ph.D. in educational administration and supervision became the educational goal.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Ralph B Kimbrough

Ralph B. Kimbrough, Chairman
Professor of Educational
Administration and Supervision

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Michael Y Nunnery

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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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